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**LA THÈSE A ÉTÉ
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THE RELATIONSHIP OF MATERNAL EMPLOYMENT AND CURRENT FIELD
OF STUDY TO CERTAIN SEX-ROLE ATTITUDES OF MALE AND
FEMALE UNIVERSITY STUDENTS

by Frances E. Smyth

Thesis presented to the School of Graduate
Studies of the University of Ottawa as
partial fulfillment of the requirements
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Psychology

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CURRICULUM STUDIORUM

Frances E. Smyth was born August 25, 1948, in Montreal, Canada. She received the Bachelor of Arts degree in Psychology from York University, Toronto, Ontario, in 1971. She received a Master of Arts in Psychology from the University of Ottawa in 1975. The title of her thesis is The Relationship between Aggression, Achievement Motivation and Scholastic Performance in Eighth Grade Boys: A Comparison of Achievement Variables in Two Aggressive Groups.

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ABSTRACT

This study examined the expressed and covert sex-role attitudes of male and female university students who were registered in a variety of occupational fields of study. Previous research has produced inconsistent results when the expressed and covert sex-role attitudes and sex-typed behaviors of university students have been examined. The theoretical rationale of this study suggested that traditional or nontraditional sex-role attitudes and behaviors are acquired through modeling of the same sex parent. Developmental theory has suggested that early experiences are more influential than later experiences. It was hypothesized, therefore, that parental models would be related to covert sex-role attitudes and occupational choice as reflected in the field of study. It was also hypothesized that expressed attitudes might represent a response to social change and might not bear any relationship to behavior of parental models.

In order to test these hypotheses, the sex-role attitudes of 72 female and 57 male volunteers from the University of Ottawa with employed and nonemployed mothers were examined. Male and female subjects were drawn from each of three occupational groups as represented by the field of study. Management and elementary Education students were chosen to represent traditionally masculine and traditionally feminine fields of study, respectively. The third

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group consisted of a variety of other occupational fields of study, some of which were sex-typed. Approximately 50% of the students in the third group came from non-sex-typed fields of study, while the remainder were from the traditionally feminine field of nursing. Students of a subsample representing all subject categories, were interviewed individually.

Covert sex-role attitudes, as reflected in the orientation towards occupational choice, were assessed using the Occupational Choice Questionnaire which was developed for this study. More general covert sex-role attitudes were assessed using the Gough Femininity Scale. Expressed sex-role attitudes were assessed using the Attitudes Towards Women Scale. A standard set of questions was employed for the individual interviews to obtain a more detailed assessment of the subjects' occupational experiences, orientation towards job selection, and sex -role attitudes.

Significant differences were found between sexes on the Gough Femininity Scale, with women obtaining the higher or more feminine score. Differences were found among faculty groups on the Occupational Choice Questionnaire, with Management students expressing an "instrumental" or masculine orientation, while Education students expressed an "expressive" or feminine orientation. Comparisons of expressed ~~attitudes~~ employing the Attitudes Towards Women Scale also revealed significant differences between sexes with women obtaining the higher or more

liberal scores. A significant difference was also found between the children of employed and nonemployed mothers, the former obtaining the higher score.

The results of this study led to several conclusions. It was concluded that parental models are important to the development of general covert sex-role attitudes but that the orientation towards occupational choice may be related to other than parental models experienced in childhood. It was concluded that general covert sex-role attitudes are not related to occupational choice, while the development of a masculine or feminine orientation to occupational choice is related to the chosen occupational field of study. While differences were found between students classified by sex, and maternal employment on expressed sex-role attitudes, it was concluded that these differences may not be important to behavior as these differences are within the liberal range.

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INTRODUCTION

In recent years, the Women's Liberation Movement has attempted to change sex-role attitudes and behaviors. As a result, there has been an increase in research on sex-role attitudes and their development.

The literature has suggested that the relative traditionalism of the parents leads to the development of traditional or liberal attitudes in college students regardless of their personal background. Other research has suggested that expressed attitudes represent superficial changes and that covert attitudes, which influence behavior, have remained conservative.

This study, based on the rationale that sex-roles are learned from parental models and that early experience is more influential than later learning, attempts to verify that stable sex-typed behaviors, such as occupational choice, are related to parental models. It also attempts to verify the suggestion, derived from the rationale, that differences in modeling experiences manifest themselves at the covert as opposed to expressed level which is thought to represent superficial change. In keeping with the results of recent research, the study attempts to determine whether the influence of modeling experiences is more pronounced for women, as opposed to men.

The first chapter presents an overview of the research on the role of models in sex-role development, the sex-role

attitudes, and behaviors of individuals exposed to nontraditional parental models, current changes in sex-role attitudes, and the problems in measuring sex-role attitudes. The chapter concludes with the statement of the problem and research hypotheses.

The review of the literature is followed by a chapter describing the research design of the study. This chapter provides detailed information on the measurement instruments used in the study, on the subjects participating in the study, and on the research procedure and statistical methods employed.

The results obtained from the research are presented in the third chapter and a discussion of these results follows in the last chapter. The thesis ends with a summary and statement of the conclusions and with suggestions for future research.

CHAPTER I

REVIEW OF THE LITERATURE

The rise of the Women's Liberation Movement in the 1960's has stimulated considerable interest in sex-role attitudes and behaviors. As a result, research has examined the development of sex-role attitudes and has attempted to assess the effects of social change on the attitudes of young men and women.

The literature on the development of sex-role attitudes has suggested that models observed during early years are important to the development of sex-role attitudes and behaviors. The experimental literature, plus the literature on maternal employment, has suggested that children, particularly females, exposed to nontraditional sex-role models develop nontraditional attitudes and behaviors. In contrast, recent studies of college students have suggested that they have been influenced by the Women's Liberation Movement which occurred during their late adolescence and early adult years in that their conscious attitudes are more liberal than those held by previous generations. Nevertheless, studies which have examined less conscious or covert attitudes suggest that these attitudes have not changed greatly in

spite of the pressures of social change. There is also some suggestion that the less conscious attitudes may be related to early life experiences.

The contrast between the expressed and covert attitudes of university students leads to the question as to which type of attitude is more closely related to behavior and whether the attitude which is better related to behavior is in turn related to early modeling experiences. Developmental theories, plus the research on maternal employment, suggest that early experiences should be more important than later learning in determining adult sex-typed behaviors. Social learning research has found support for the idea that children model the behavior of same sex models. The research on maternal employment mentioned previously has suggested that the observation of a typical or atypical model is related to adult behavior.

This study attempts to verify that covert attitudes are related to stable sex-role behaviors such as occupational choice. Secondly, it attempts to verify that covert sex-role attitudes are related to early modeling experiences. Thirdly, this study attempts to verify that females are more influenced by early experience with nontraditional models than males.

This chapter will examine the relationship between parental models, sex-role attitudes measured using different techniques, and sex-typed behaviors. The first section of the chapter reviews the literature on the role of modeling in the development of sex-typed behavior. The second section of the chapter examines the relationships between exposure to nontraditional sex-role models and sex-role attitudes and behavior. The influence of the Women's Liberation Movement on sex-role attitudes is examined in the third section of the review. The fourth section reviews the literature which suggests that problems exist in the measurement of sex-role attitudes and in determining their relationship to behavior. The final section of this review summarizes the research problem and presents the hypotheses.

The Role of Modeling in the Development of Sex-typed Behaviors

A review of the literature on the development of sex-typed behavior suggests that there are two prominent theories today. Kohlberg (1966) has developed a cognitive developmental explanation of the development of sex-typed behaviors. Another point of view, elaborated by Mischel (1970) to explain sex-role development, is known as the social learning theory view.

Kohlberg's (1966) theory places most emphasis on cognitive processes. Sex-role learning begins when the young child develops a gender identity or cognitively categorizes him/herself as a male or female. The concepts of male and female and the stereotypes associated with them arise initially from observation of sex differences in body structures and capacities. For example, men are physically larger and more powerful than women. This physical difference in the child's mind becomes associated with social power. Observation of extrafamilial roles later facilitates this stereotyping as males hold the roles with maximum social power in most societies. Behavior begins to conform to these concepts as the categorization of the self as male or female determines basic values. In other words, once the child has categorized him/herself as to gender, people of this gender and their activities are valued and so imitated.

Social learning theory explains the sex-typing of behavior much as other behaviors are explained. Observational learning, which requires models and reinforcement, determines the child's concepts and performance of appropriate sex-role behaviors.

Models appear to be important to both theories, although social learning theory seems to place greater emphasis on the importance of modeling. Maccoby and Jacklin (1974) summarize the differences and similarities in these two theories in the following quotation:

Mischel's position is that the reinforcement history of the individual, and his observations of the reinforcements delivered to models, will determine which actions a child selects out of his repertoire for performance. Sex-typing, then, according to this view, would be a product of direct reinforcement (to self or others) for sex-appropriate behavior. The alternative point of view is Kohlberg's: that it is the child's growing understanding of the content of the sex roles prescribed by the culture around him, that determine the child's behavioral choices. In this view, sex typing is dependent upon certain aspects of cognitive growth. A child's inferences concerning what behavior is sex-appropriate are partly based, of course, upon the instances of differential reward and punishment, and in this sense Kohlberg's theory is not distinct from Mischel's. But in the cognitive-developmental view, differential reinforcement is only one of the sources of information a child uses to construct the concept of sex-appropriate behavior that he uses to guide himself (p. 302).

As both major theories acknowledge the importance of modeling, this review will cover the research from the social learning theorists who have emphasized the importance of modeling. Social learning theory demonstrates the existence of modeling and suggests that certain model characteristics may facilitate modeling. Particular emphasis will be given to research which suggests that the same sex parent will be a particularly potent model for sex-role learning.

Bandura, Ross, and Ross (1961) have demonstrated experimentally that new behaviors can be learned strictly through observation and will be displayed when the subject finds himself in an appropriate or similar situation. Children approximately 4 years of age watched models of each sex display aggressive or inhibited behaviors. The behaviors displayed were both

verbal and nonverbal and were felt to be sufficiently distinctive that they would not be performed without observation. Later, when the experimental children were frustrated, they were significantly more likely than the controls to imitate the models they had observed in the same situation.

Observation of models can also alter previously learned behaviors (Bandura & Mischel, 1965). Children who were pretested for their tendency to prefer immediate or delayed reward were exposed to models displaying the opposite pattern of behavior on the same type of task. Posttesting revealed significant changes in the children previously displaying either tendency.

Nurturance on the part of the model seems to facilitate imitation. Bandura and Huston (1961) demonstrated this by exposing matched groups of preschool children to a nurturant or a non-nurturant model. The model later displayed verbal, motoric, and aggressive behaviors which were totally irrelevant to the discrimination task she was supposedly demonstrating. Observation of the children performing the same task revealed a significant tendency to imitation of the nonaggressive behaviors and verbalizations in children exposed to the nurturant model.

Later research by Mussen and Parker (1965) suggested that this relationship between model nurturance and imitation holds within the family context. In this study, mothers displayed irrelevant verbal and nonverbal behaviors when demonstrating

a discrimination task. Mothers who had been rated more nurturant on the basis of a pre-experimental interview were imitated significantly more often.

Research on the family factors associated with the strength of sex-typing in children and adolescents has also suggested the existence of a relationship between model nurturance and imitation. Studies of adolescent males (Mussen, 1961; Payne & Mussen, 1956) suggest that masculine sex typing or agreement with paternal attitudes, orientations, and preferences was related to a high level of satisfaction with the relationship to the father. No difference was found in the relationship with the mother when high and low masculine type boys were compared.

Studies with younger children have yielded similar results. Kindergarten boys who showed a strong preference for the masculine role showed a perception of their fathers as more nurturant during structured doll play than did boys with low masculine preference. Again, the relationship to the mother appeared to be unimportant (Mussen & Distler, 1959). A follow-up study (Mussen & Distler, 1960) suggested that the perceptions of the children were realistic as the mothers of high masculine boys perceived their husbands as more nurturant to their sons when compared to mothers of low masculine boys. Replication of this study with girls (Mussen & Rutherford, 1963) showed the same tendency in females.

These studies suggest that the children showed particularly strong sex-typing because they had exceptionally nurturant relationships with the same sex parent. If one assumes that same sex parents usually show nurturance towards their children, this should facilitate their becoming a potent sex-role model for the child.

Power, or the ability to control reinforcements to the child, also appears to increase the likelihood that children will imitate models (Bandura, Ross & Ross, 1963a; Mischel & Grusec, 1966). The Bandura et al. (1963) experiment demonstrated that it is the child's perception of the model as capable of giving reinforcements rather than the child's experience of actually receiving reinforcements from the model that bears a relationship to imitation. In this experiment, the model gave desired resources exclusively to the child while another adult was neglected. In the other experimental condition, the adult received the resources while the child was neglected. The sex of the adult models and sex of the child subjects were varied. The results supported the importance of power as opposed to actual reinforcement. In both experimental treatments, regardless of whether the rival adult or the child received the rewarding resources, the model who possessed rewarding power was imitated most often.

The importance of future control was illustrated by Mischel and Grusec (1966). Models were presented as having

varying degrees of control over the child's future. In one experimental group, the model was presented as a visiting teacher who would not see the child again. In the other experimental condition the model was presented to the child as his new teacher. The models were also varied on the dimension of rewardingness so that four possible combinations resulted. The results suggest that rewardingness and future control were positively related to imitation. Possibly the power aspect of adult-child relationships accounts for the results obtained by Hicks (1965). Although male peers were the most effective models on a short-term basis, follow-up retesting suggested that adult male models were most effective over time in eliciting modeling behavior in male children.

The studies of highly sex-typed children previously reviewed provide some indirect evidence to support the relationship between model power and imitation (Mussen & Distler, 1959; Mussen & Rutherford, 1963). The highly sex-typed children were found to perceive their same sex parent as both more nurturant and more punishing. These results could be taken as suggesting that these children experienced their same sex parent as having a great deal of control over them. Their perception would appear to be related to reality as the mothers of highly sex-typed boys reported that the fathers and sons interacted more than was the case in the families of low sex-typed boys (Mussen & Distler, 1960).

Perceived similarity between subject and model appears to be an important facilitator of imitation. Possibly this factor provides one of the examples of the overlap between the cognitive and social learning theories of sex-role development. Kohlberg (1966) suggests that children choose to model the behaviors of the same sex parent because they have learned to identify and value their own sex. Values may provide the underlying dynamic explaining why social learning theorists have found that perceived similarity to the model facilitates imitation in the observer.

Early research by Maccoby and Wilson (1957) suggested that sex-role learning might be influenced by the apparent tendency to focus more attention on a similar person (i.e., a person of the same sex). Adolescents of both sexes were shown a movie featuring boys and girls. After the movie, they were given measures of identification and memory. The results suggested that boys and girls identified more with the same sex movie characters. They were also more likely to remember the experiences and behaviors of characters of their own sex.

A later study by Rosekrans (1967) controlled for sex of the model but varied the similarity of model and subject. If the subject perceived the model as similar to himself on a pretest, he was significantly more likely to imitate the model's behavior. Other studies cited previously in this review have indicated that children are more likely to imitate a model of

their own sex, all other things being equal (Bandura, Ross & Ross, 1961; Hicks, 1965).

Similarity may account for the frequent finding that live models are more influential as objects of imitation than symbolic models (Bandura & Mischel, 1965; Bandura, Ross & Ross, 1963b; Hicks, 1965). However, symbolic models (i.e., films) have been found to be more effective than the control or no model condition in all the above experiments.

As television has become a permanent fixture in modern life, researchers have examined the relationship between the sex-role models presented on TV and the sex-role attitudes and behaviors of child viewers. MacArthur and Eisen (1976a) studied the influence of TV on nursery school children. A preliminary study provided some evidence to suggest that both television programs and commercials present men and women as stereotypes. A later study indicated that the children imitate the behaviors of the stereotypic character of their own sex. As television provides fewer female models, it was inferred that boys would be more influenced in their sex-role development than girls as children tend to imitate same sex characters. A study of elementary school children (Frueh & McGhee, 1975) suggested that children's development of traditional concepts of sex roles was positively related to the time spent watching TV. Again, girls were found to be less influenced than boys.

A study by Cheles (1974) supports the earlier finding that live models are more likely to be imitated than symbolic models in a study of children's acceptance of TV characters. In general, the children accepted the stereotypes, but this effect was strongest in children from single parent families or those who did not live with their natural parents. These results suggest that the larger society is possibly having more influence on the child's development of sex-role attitudes with the advent of TV, but that the strength of this influence depends on the home situation.

Social learning theory differentiates between the acquisition and actual performance of sex-typed behaviors (Mischel, 1970). Direct reinforcement to the child is highly important in determining his emission of sex-appropriate behaviors. Nevertheless, models are still an important influence on the performance of sex-typed behaviors owing to the principle of vicarious reinforcement. Bandura, Ross, and Ross (1963c) found that the consequences experienced by models were strongly related to the willingness of the children to imitate the model's behavior at a later time despite the fact that these children had not experienced the reinforcement directly. Rosekrans (1967) found similar results. Studies which have attempted to elicit aggression as the imitative behavior have found that girls, regardless of condition, have been less likely to behave aggressively (Bandura, Ross & Ross, 1961;

Bandura, Ross & Ross, 1963b, 1963c). The authors have suggested that these results may have been obtained because girls have been negatively reinforced for aggression in the past and have observed other females being negatively reinforced in the past.

In summary, it may be said that models seem to be an important variable in the development of sex-role behaviors. It would appear that the same sex parent would be a particularly influential model, provided that the parent-child relationship is not deviant. The qualities of nurturance, control over resources in the present and future, and similarity are qualities that are all facilitators of imitation. Provided the parent-child relationship is normal, all these qualities are present in the same sex parent. The next section of this review will examine the sex-role attitudes and behaviors of individuals whose parents present nontraditional sex-role models.

The Relationships between Nontraditional Sex-role
Models, Sex-role Attitudes, and Sex-typed
Behaviors

The preceding section of this review has suggested that models are important in the development of sex-role attitudes and sex-typed behaviors. The literature has also suggested that parents may be particularly influential models. It seems reasonable to predict that if models, particularly parents,

demonstrate nontraditional sex-role behaviors, children will in turn develop nontraditional sex-role attitudes and behaviors. This section of the literature review will attempt to shed some light on this issue by focusing on studies which have examined the sex-role attitudes and behaviors of individuals who have been exposed to nontraditional models, with particular emphasis on studies using the children of employed women. Employed mothers are operationally defined as non-traditional sex-role models in this research as they are displaying behavior generally associated with the male sex role in working outside the home and contributing financially to the maintenance of the family.

Studies which have examined the relationships between sex-role models and sex-role attitudes or behaviors on the part of the observer involve both short- and long-term exposure to models. The Women's Liberation Movement has called for change in women's roles in society and has emphasized the necessity of changing the education of children as a means of promoting social change. Possibly as a result of the Women's Movement, researchers have conducted experiments in which young children have been exposed to nontraditional models. Later, their sex-role attitudes have been compared to those of other children who have not had this experience. These studies, of necessity, have involved short-term exposure to the models. Research studies examining the sex-role attitudes and behaviors

of children of employed mothers provide an opportunity to examine the relationships between sex-role attitudes or behaviors in subjects who have had long-term exposure to a nontraditional model. In addition, these studies provide the opportunity to examine these relationships when the model may be particularly potent.

This review will begin with the experimental studies. Jennings (1975) assessed the reactions of nursery school children to nontraditional as opposed to traditional sex-role models by testing their preference and recall of stories in which the characters varied as to the degree to which they matched sex stereotypes. The children were divided into same sex groups and were read stories with accompanying pictures. The order of presentation of the stories was varied. Immediately after exposure to the stimuli, the children were tested individually for preference and recall of the two stories. The results suggested that both sexes preferred the typical story but recalled the atypical story better. These results create the impression that the children were aware of traditional stereotypes. Superior recall of the nontraditional story suggests that they may have paid more attention to a story in which the characters deviated from norms which they had learned. However, it seems unlikely that their conception of appropriate sex-role behavior was altered if preference can be taken as indicative of approval. Given the brief

exposure to a nontraditional model, these results are hardly surprising.

Weeks, Thornburg, and Little (1977) conducted an experiment in which the treatment was more intensive. For two weeks, kindergarten children were exposed daily to treatment designed to reduce sex-role stereotyping. Both live and symbolic models were used in the program. The experimental children met men and women in nontraditional occupations and were exposed to nonsexist songs and stories. Pre- and post-testing used 13 pairs of vocational roles. Each pair contained one traditionally male occupation and one traditionally female occupation. The subject was asked to indicate which vocation he or she would prefer out of each pair. Comparison between the experimental and control children on posttest scores produced no significant differences. However, there was a trend suggesting that the experimental females tended to become less traditional. While the experimental treatment in this study was still brief, it was more intense than that of the Jennings (1975) study which may account for the emergence of trends in the expected direction.

Other studies in which the children have not been asked for personal preference have produced more significant results. It seems reasonable to assume that a statement of personal preference for a role demands more commitment to one's beliefs than the willingness to assign a role to females

or males in the abstract. Possibly, personal preference for nontraditional sex roles would be the type of measurement which would be least likely to indicate changes in sex-role attitudes.

Bloomberg (1974) exposed 4- and 5-year-old children to a 10-week instruction program on occupational role concepts which attempted to reduce sex stereotyping in occupations. He found that older children were more stereotyped than younger children. The results suggested that children exposed to this program were less inclined to assign an unfamiliar job to either sex than were the control children.

Another study by Merx, Fidler, and Rogers (1976) examined the relationships between exposure to nontraditional sex-role models and sex-role attitudes within a wider age range. Children ages 3 to 5 were pretested for sex stereotyping using a doll choice technique. Experimental treatment consisted of exposure to nontraditional sex-role models in story books over a 5-day period. The results suggested that the subjects were aware of sex stereotypes by age 3 but were more traditional at ages 4 and 5. The males were found to be more stereotyped in their sex-role attitudes than the females. While experimental treatment was related to reduction in stereotyping on the post-test, the strength of the relationship was related to the variables of age and sex. It appeared that females and 5-year-old children were most likely to show reduction of stereotyping after viewing nontraditional models. A second experiment with

a similar design was conducted with the intention of replicating the results of the first experiment and testing the use of film as opposed to story book models. The results of the second experiment conformed to those of the first and also suggested that the use of film models was related to greater posttest changes in stereotyping. These results conform to those of Bandura, Ross, and Ross (1963b), Hicks (1965), and Bandura and Mischel (1965) who found that greater imitation of models seemed to occur as the models used became more life-like.

In general, the results of the studies reviewed thus far suggest that children become more traditional in their sex-role attitudes as they enter elementary school. Studies which have produced significant results suggest that children of kindergarten age, particularly females, may be more susceptible to changes in attitudes as a result of exposure to nontraditional models than younger children. It seems possible to suggest that females may be more likely to change their attitudes because they are aware, even at this early age, that the female role is less valued.

The preceding studies have concerned themselves only with sex-role attitudes but have not examined the relationship between exposure to nontraditional models and the willingness to engage in nontraditional behavior at a later time. A study by Potter (1975) examined the relationship between exposure to

achieving models of the same or opposite sex to the subject and subsequent achievement behavior on the part of the subject. Eight-year-old children of both sexes were read one of three stories. In one story, the male character was presented as the superior problem-solver, while in another the female character was presented as superior in this regard. The third story was egalitarian in nature, suggesting that both males and females were problem-solvers. After hearing the stories, the children were asked to solve puzzles designed as a measure of problem-solving performance. The results of this study suggested an interaction between the experimental treatment and the sex of the subject with males performing best when exposed to the egalitarian story and females performing best when an achieving female was observed. Although problem-solving would seem to be typical of the traditional male sex role, the female subjects were willing to deviate from tradition when a non-traditional model was presented to them.

A similar experiment was performed involving nursery school aged children (McArthur & Eisen, 1976b). The conditions differed only in that the third story did not involve achievement. After listening to the story, the children were tested individually for their persistence on a problem-solving task and their recall and preference for the same or opposite sex character. Males were found to persist significantly longer when exposed to an achieving character of their own sex.

Females showed the same trend although the results did not reach the level of statistical significance. Recall of a same sex achieving character was significantly related to persistence. In keeping with other studies ~~which~~ have been reviewed, both sexes preferred the character whose sex was similar to their own, regardless of whether the character was an achiever or not. The results of both these studies should be viewed with some caution as the behavior thought to be influenced by modeling was not pretested.

A study by Elliot (1973) avoided this flaw, yet the results support the studies of Potter (1974) and McArthur and Eisen (1976b). This study tested the relationship between exposure to nontraditional career models and subsequent occupational aspirations. College women who were found to have low occupational aspirations on a pretest were assigned to experimental and control groups. The experimental group was exposed to videotapes in which females who operated at high levels of both occupational and familial responsibility were interviewed. Although the experimental and control groups did not differ significantly on the pretest scores, they differed significantly on posttest scores because the experimental group had raised their level of aspiration.

Although the studies reviewed suggest that changes in sex-typed behaviors may be related to exposure to nontraditional models, this tentative conclusion should be restricted to

females. None of the studies reviewed has given male subjects the opportunity to engage in behaviors normally associated with the female sex role. Instead, the achieving, instrumental behaviors associated with the male role have been the object of study. In view of the fact that females have shown greater willingness to change sex-role attitudes than males, it cannot be assumed without evidence that males would engage in behaviors stereotyped as feminine if exposed to nontraditional male models.

In summarizing the experimental studies reviewed here, it seems possible to say that they have supported the idea that models may be instrumental in changing sex-roles in society. It appears that exposure to nontraditional models is related to attitude changes in young children, particularly if they are females. In addition, females exposed to nontraditional models appear to be more likely to engage in male stereotyped behaviors later. It is not known whether these changes in attitudes or behavior persisted, but it is impressive that they appeared at all when one considers that the exposure was generally very brief and was given to subjects who, presumably, had experienced traditional socialization.

The studies which have examined the relationships between a nontraditional female model in the family (employed mother) and sex-role attitudes and behaviors are much more numerous than the experimental studies reviewed. As a result, many different measurements of sex-role attitudes and behaviors

are found in the literature. Before reviewing this body of literature, a distinction will be made between two types of sex-role attitudes. Etaugh (1974) has suggested that the term sex-role perceptions be used to refer to opinions as to what personality traits and behaviors are typical of men and women. The term sex-role ideology, on the other hand, should be used to refer to beliefs as to what behaviors are more appropriate for men or women. Sex-role perceptions in the children of employed women will be discussed first in this review.

Vogel, Broverman, Broverman, Clarkson, and Rosenkrantz (1970) examined the sex-role perceptions of male and female college students who had either traditional or employed mothers. The employed and nonemployed samples were similar with respect to educational and occupational level of the parents. The subjects were asked to complete three copies of a questionnaire containing 122 bipolar characteristics. They rated each questionnaire for either the average man, woman, or themselves. The results suggested that maternal employment was related to a tendency to see less difference between the sexes on those items which had previously been found to be sex stereotypic (Rosenkrantz, Vogel, Bee, Broverman & Broverman, 1968). While both males and females showed this tendency, the trend was found to be more pronounced for females. The results also suggested that while both sexes seem to have less stereotypic sex-role perceptions if the mother is employed, the manner in

which they differ from individuals receiving a traditional socialization varies according to sex. It appears that each sex tends to "upgrade" their own sex on traits valued in the opposite sex if the mother is employed. In other words, the daughters of employed mothers see women as more competent while the sons see men as more nurturant when compared to the children of traditional mothers.

Another study, which restricted itself to college women, produced somewhat different results (Baruch, 1973a). This study employed the same questionnaire employed by the Vogel et al. (1970) study. The students were required to rate themselves on the same questionnaire. Although maternal employment was not significantly related to self-ratings of competence, a male valued characteristic (Rosenkrantz et al., 1968), maternal desire for a career was positively related to self-ratings of competence. In this study, lengthy maternal employment was not required for inclusion in the maternal employment group. Employment of the mother on a quarter-time basis for a minimum of one year in the subject's life was sufficient to merit inclusion in the employed group. This liberal interpretation of maternal employment may account for the negligible relationship found between maternal employment and sex-role perceptions. It also seems possible to suggest that modeling did relate to the results obtained in that mothers desiring a career provided a model of belief in feminine competence and may have

demonstrated achieving, competent behaviors in unpaid activities.

Research using younger subjects suggests that the children of employed mothers show nontraditional sex-role perceptions at an early age when compared with children experiencing a more traditional home life. Hartley (1960) used a projective device to examine the sex-role perceptions of children of both sexes aged 5, 8, and 11. The results suggested that the daughters of working mothers had a wider range of vocational choices than the daughters of homemakers. Later studies of 10-year-old children and adolescents (Gold & Andres, 1978a, 1978b) produced similar results. In this sample, males as well as females had less traditional sex-role perceptions. There is some evidence to suggest that the children of working mothers show these tendencies as soon as they reach the ages at which sex-role perceptions could be said to exist. Miller (1975, who studied 5-year-old girls, and Gold and Andres (1978), who studied nursery school children of both sexes, found significantly less traditional sex-role perceptions in children whose mothers were employed.

The foregoing studies suggest that the sex-role perceptions of the children of employed mothers show less differentiation between males and females, particularly when the child is female. The orientation which appears to be associated with maternal employment, in which both sexes are

seen as possessing valued male and female stereotypic traits has been labeled androgyny (Bem, 1974). It is interesting to note that a study on the socialization factors related to the development of androgyny in males and females (Kelly & Worell, 1976) suggests the necessity of the nontraditional same sex parent model. Study of the androgenous as opposed to masculine, feminine, or undifferentiated college students in the sample indicated that a unique pattern of parental characteristics, as perceived by the subjects, was related to the development of an androgenous orientation. It appeared that androgyny in females was related to maternal reinforcement for cognitive curiosity while androgyny in males was related to paternal warmth. The authors concluded that:

The presence of parents who model and reinforce cross-typed characteristics is related to nontraditional roles in children. The likelihood of an androgenous orientation is especially enhanced when the same sex parent exhibits cross-typed characteristics (p. 849).

Needless to say, the perception of cross-sex typed characteristics in the parent need not necessarily be associated with maternal employment. Baldigo (1976) tested sex-role flexibility by coding the reactions of children to a story in which the parental and sibling sex-roles were reversed relative to sex stereotypes. Although children ranging in age from 5 to 10 years were tested, no relationship was found between maternal employment and sex-role flexibility. However, an egalitarian division of household labor was positively related to sex-role

flexibility. This relationship suggests that changes within the home as a result of maternal employment may be crucial to the development of nontraditional sex-role perceptions at this age. However, the trend towards androgeny in the children of employed mothers suggests that they generally do model traditionally male behaviors while their husbands model traditionally female behaviors. Gold and Andres (1978a, 1978b, 1978c) compared the sex-role attitudes of employed mothers and their husbands to those of traditional parents and found some evidence to suggest that they had less traditional attitudes. In addition, the employed mothers and their husbands perceived themselves as behaving more similarly than did the traditional parents.

In summary, it may be said that maternal employment seems to be associated with nontraditional sex-role perceptions in both males and females. It appears that these perceptions are related to a perception of both parents as nontraditional models if the mother is employed.

The studies which have examined the relationship between maternal employment and sex-role ideology have also produced some evidence to suggest that nontraditional attitudes towards sex roles are found in individuals whose mothers were employed. Meier (1972) examined the attitudes of college students of both sexes. The subjects filled out a questionnaire designed to rate their attitudes towards social equality

for women. They were then asked to give the educational level of both parents and to indicate which parent had influenced their general attitudes to the greatest extent. The results suggested a positive relationship between maternal education or employment and maternal influence on attitudes in general and attitudes towards women. A highly educated woman who was currently employed had much more influence on general attitudes than did other women. Maternal education and employment were also positively related to attitudes towards social equality for women. Both relationships were most pronounced for female subjects.

As with sex-role perceptions, the literature suggests that a more liberal sex-role ideology in the children of employed mothers begins at an early age. Two studies of ninth grade adolescents (King, McIntyre & Axelson, 1968; Miller, 1976) suggest that adolescents are more liberal in their sex-role ideology if the mother is employed. In the King et al. (1968) study, both males and females with employed mothers saw maternal employment as less threatening to the marital relationship when compared to subjects from traditional families. Miller's (1976) study restricted the sample to female students. Although the daughters of employed women did not differ significantly from the daughters of homemakers in their approval of employed mothers, they did show significantly greater approval of wives working.

There is some evidence to suggest that subcultures in which maternal employment is common are more egalitarian in their sex-role ideology (Steinmann & Fox, 1970). Black and Caucasian undergraduates of both sexes, registered in a university in the southern United States, were asked to respond to the Inventory of Feminine Values, which is a measure of sex-role ideology. They completed the form three times so that they responded according to their own beliefs and also as they felt the ideal woman and man's ideal woman would respond. Women from both subcultures obtained similar scores on the self and ideal woman scales. The same similarity of response on these scales also appeared for men in each subculture. However, in the white sample, man's ideal woman was differently perceived by men and women. The white women perceived man's ideal woman to be much more traditional than did the men. This discrepancy between men and women was not found within the black sample. The researchers attributed these results to differences in family structure. "The black youth in today's society has more exposure to the reality of the working mother than white youths" (p. 367).

The literature provides some evidence to suggest that maternal satisfaction may be a factor which intervenes in the relationship between maternal employment and sex-role ideology for women. Baruch (1972, 1974) has examined these relationships through questionnaires and structured interviews.

Baruch's discussions of her results in both studies suggest that the mother is a model for sex-role ideology, and that vicarious reinforcement for sex-role behaviours may be given to the daughter as she observes her mother's satisfaction with her life. The type of reinforcement the mother receives will in turn be related to the daughter's endorsement or rejection of the type of sex-role ideology her mother represents. She summarizes her results in saying:

Mothers who were dissatisfied with their own role pattern were rarely chosen for pattern preference. This finding of course simply indicates that daughters do not want to emulate someone who is unhappy with her role (p. 177).

The results also suggested that, maternal satisfaction being equal, daughters were more likely to prefer the lifestyle of the working mother, possibly because they perceived her as having greater status. Another study by Lipman-Blumen (1972), using the wives of graduate students, found a significant relationship between maternal role satisfaction and endorsement of egalitarian sex-role ideology. Once again, the employment status of the mother was unimportant but a positive relationship was found between maternal dissatisfaction with a homemaker role and the daughter's belief in egalitarian sex-roles.

The relationship between maternal satisfaction and the son's sex-role ideology has received less attention in the literature. There is some indirect evidence that maternal employment in the lower SES classes is interpreted by the son

as a sign of incompetence on the part of the father since the mother may not choose to work. Douvan (1966) and McCord, McCord, and Thurber (1963) found that lower class males with employed mothers were significantly less likely to name their fathers as people they particularly admired. Although maternal employment has become more common in recent years, and is less obviously economically motivated, Propper (1972) and Hoffman (1974) found similar results in lower class males.

A study of black adolescents (King, Abernathy & Chapman, 1976) provides a more in-depth examination of maternal employment as a threat to the male. The authors devised a questionnaire which covered several ideas concerning the negative results of maternal employment (i.e., failure for man if mother works, failure for man if mother earns more, loss of companionship and neglect of husband if mother works, too independent). Results for males and females were compared for 1963 and 1973. Although maternal employment was perceived as less threatening to the 1973 sample, there were some indications that maternal employment may still be quite threatening for lower class males. Males were found to be more threatened by maternal employment than females and lower SES classes were found to be more threatened than higher classes.

The study of 10-year-olds by Gold and Andres (1978a) reported previously has examined the father-son relationship in lower class homes in which the mother was employed. Their

results suggested that these boys were more negatively described by their fathers. The sons were found to differentiate more between sex-roles than boys from similar backgrounds whose mothers were not employed. The authors suggest that:

Since the working-class fathers with employed wives in this study were more critical of their sons, it is likely that they in turn were not regarded as satisfactory role models to help guide the sons in developing their gender identity. The exact nature and priority of events in the father-son relationship remain to be determined (p. 83).

Although these researchers reported that employed mothers were generally much more content with their roles than the nonemployed mothers, the relationship between SES and maternal satisfaction does not appear to have been studied. Possibly research into this relationship might have explained the development of the father-son relationships found in lower class families with employed mothers.

In general, it appears that maternal employment is related to the development of a more egalitarian sex-role ideology in children, particularly females. Maternal satisfaction seems to be a mediating variable in this relationship. Maternal satisfaction, in turn, seems to be related to the choice to work with the result that maternal satisfaction with employment may be more prominent in the middle class.

As more women have entered the work force in recent years, career commitment has been a subject of study. As paid employment has traditionally been associated with the

male role, the degree of commitment to a career may be considered as a measurement of sex-role ideology. Several studies have suggested that sex-role ideology and career commitment are related. Halas (1974) studied the history, attitudes and behaviors of mature female students who were married or had been married. The subjects had returned to school after an absence of at least three years. They were compared to homemakers who came from similar backgrounds. The results suggested that the student group was less traditional in their sex-role ideology and was more motivated to obtain careers than the homemakers. Vogel, Rosenkrantz, Broverman, and Broverman (1975) administered the sex-role stereotype questionnaire (Rosenkrantz et al., 1968), which has been mentioned previously, to female university students along with a questionnaire concerning their future plans, including the role of employment in their lives. It appeared that those with traditional sex-role perceptions also had a traditional sex-role ideology in which career commitment was negligible. Similarly, Heinsohn (1975) found that college seniors holding traditional sex-role attitudes were more likely to expect a future as a homemaker, while those with nontraditional ideology tended to be uncommitted or career committed.

Since it appears that career commitment and nontraditional sex-role ideology are related, it is not surprising that the literature provides evidence supporting a positive

relationship between maternal employment and career commitment in daughters. Both Etaugh (1974) and Hoffman (1974) reviewed studies of elementary school, adolescent, and college aged women and found evidence of more career commitment in the daughters of working women. Since these reviews, Hanley (1974) and Altman (1975) have found more evidence supporting the relationship between career commitment and maternal employment in college women.

Thus far, this review has focused only on the relationship between maternal employment and sex-role attitudes. While it appears that children of both sexes acquire nontraditional sex-role attitudes when exposed to a working mother, the existence of this relationship does not necessarily mean that their sex-role behaviors will also be nontraditional. The following section of this review will examine studies which have examined the correlates of nontraditional sex-role behavior. Two main areas of sex-role behavior will be examined, namely, academic achievement and vocational choice.

Academic achievement has been selected as an area of sex-role behavior worthy of inclusion in this review because of the frequent association between academic success and success in the vocational world which is part of the male role. Also, the emphasis on cognitive skills in academics, as opposed to expressive skills, leads to the sex-typing of academic achievement as a masculine behavior.

There is some evidence in the literature supporting the idea that sex-role attitudes are related to achievement in females. A recent study (Topping, 1976) suggests that a positive relationship between nontraditional sex-role attitudes and academic achievement exists in females even during the elementary school years. The study examined the relationships between sex-role preference, I.Q., achievement, and other variables in children at three levels of elementary school. The results suggested that there is no relationship between academic achievement and sex-role preference in males. However, there appeared to be a significant negative relationship between traditional sex-role attitudes and academic achievement or I.Q. scores in females. The results also implied that this relationship may become more pronounced with age.

Other studies of adolescents and college-age subjects support Topping's (1976) suggestion that the positive relationship between nontraditional sex-role attitudes persists as females mature. Houts and Entwisle (1968) found that sex-role attitudes appeared to be an intervening variable which influenced the relationship between attitudes towards competing for grades and actual achievement in adolescent females:

The relationship between achievement attitudes and grades among the masculine sex-role group suggests that these women express their competitive feelings towards men openly through competitive effort in the classroom whereas the lack of relationship between achievement attitudes and grades among traditional women suggests that they are more inhibited in expressing their competitive feelings (p. 286).

A study of college-age women (Thurber, 1976) suggests that traditional women direct their achievement strivings towards social activities, while nontraditional women direct their achievement strivings towards academics. Using the Mehabrian scale, which measures achievement motivation, he found that achievement motivation scores correlated significantly with academic achievement in women whose sex-role attitudes were nontraditional. When sex-role attitudes were traditional, this relationship was not found, but a significant correlation appeared between the achievement motivation score and social achievement. Other studies of college women have also produced significant relationships between academic achievement and sex-role attitudes (Etaugh & Gerson, 1974; Reichental, 1975). No significant relationship appeared between these two variables in a study by Williams and King (1976). However, the authors explain the lack of relationship between the two variables as being due to the small range of grades among the subjects, since all subjects had received fairly high grades.

In view of the fact that the children of employed mothers have tended to have nontraditional sex-role attitudes, it seems likely that daughters of working mothers would show superior academic achievement when compared to comparable peers. Etaugh (1974) and Hoffman (1974) have reviewed the literature in this area. Studies of elementary and secondary school students were included in their reviews. Both reviewers

found that the results of early studies on the relationship of maternal employment to academic achievement were somewhat ambiguous, possibly because of the failure to control for such relevant variables as SES, parental education, and sex. Later studies which controlled for these variables suggested that complex relationships exist between maternal employment and academic achievement. Etaugh (1974) summarized her review in saying that "maternal employment appears to be unrelated to academic achievement for girls or negatively related for boys in line with Hoffman's (1963a) hypothesis. Among children of working mothers, those with mothers in professional occupations show the highest achievement" (p. 83). Hoffman (1974) drew similar conclusions. However, she felt that the negative relationship between maternal employment and academic achievement in males occurred primarily with middle class males.

Studies conducted since these reviews have tended to support these conclusions. Gold and Andres (1978b) found lower academic achievement in middle class males of elementary school age in keeping with Hoffman's results. The importance of controlling for such variables as maternal education and occupational status was emphasized in a recent study by Query and Kuruvilla (1975). Data on academic achievement, length and type of maternal employment, and maternal education were gathered for grade nine students from intact families. No statistically significant differences in academic achievement

were found between the adolescents with working or nonworking mothers. Nevertheless, there was a trend to better performance in children of employed mothers, particularly when the subjects were female. Examination of other variables indicated that maternal education and occupational status contributed to this trend, whereas part- or full-time employment and length of employment did not. Females with employed mothers having high education or high professional status obtained significantly higher achievement scores than daughters of unemployed women.

In summary, it may be said that maternal employment does not seem to bear a particularly strong relationship to academic achievement. Significant relationships only appear when other variables are controlled. It appears that a positive relationship occurs between the two variables in females if the mother has a prestigious occupation or one that requires considerable education. For males, middle class status, which probably involves the employed mother in a more prestigious occupation, is negatively related to academic achievement. It is interesting to note that the trends match what might be predicted from knowledge of the relationships between maternal employment, sex-role attitudes, and academic achievement. In view of the evidence suggesting that both sexes are less stereotypic in their sex-role attitudes when the mother is employed it seems reasonable to suggest that females would be

less inhibited in participating in a male sex-typed activity while males might place less importance upon academic success. The restriction of these trends to the middle class may be explained by the greater probability of maternal choice to work and subsequent satisfaction, as maternal satisfaction has been found to influence the endorsement or rejection of non-traditional lifestyles in young adults.

The lack of extensive evidence supporting the relationship between maternal employment and academic achievement may be due to the problems which are generally encountered in predicting academic achievement. Possibly the choice of nontraditional careers, many of which demand more education, may provide a clearer picture of the relationship between maternal employment and nontraditional sex-role behaviours. It is to this topic that this review now turns.

Research has indicated that vocations are sex-typed (Oppenheimer, 1973) and that few prestigious occupations are traditionally considered as appropriate for women. It seems reasonable to suggest that entry into an occupation dominated by the opposite sex might be related to nontraditional attitudes towards sex roles. There is considerable evidence in the literature to support this suggestion.

A study by Heilbrun (1969) supports the suggestion of relationships between models, sex-role attitudes, and vocational choice. This study focused on the relationship between

sex-role attitudes and the range of occupational choice. College females who identified with a traditionally feminine mother had the narrowest range of occupational choices according to the Strong Vocational Interest Blank. In contrast, males identifying with a traditionally masculine father had the widest range of occupational choice on this scale.

Studies of college females enrolled in nontraditional fields of study for women have suggested that these women hold nontraditional sex-role attitudes when compared to women enrolled in more traditional fields. A comparison of attitudes and aspirations among female occupational therapy, education, and science majors (Mintz & Patterson, 1969) produced results suggesting that the science majors were significantly less traditional in their attitudes than the other two groups. The results also suggested that those aspiring to higher degrees were less traditional in each field of study. Michaelson (1974) chose women from a variety of fields. He classified these fields as either traditional or nontraditional according to the ratios of females to males currently employed in the field. A ratio of 2:1 led to classification in the traditional group, while the opposite led to classification in the non-traditional group. The results supported those of Mintz and Patterson (1969) in showing the nontraditional group to hold less traditional sex-role attitudes.

Research on older women who are currently employed in nontraditional fields provides results similar to those obtained with college age women. Nagely (1971) explored the differences between women who chose traditional female careers and those employed in male-dominated occupations after they had graduated from college. Both groups of women averaged age 35, the range being age 28 to 48. All subjects were married and had at least one child living at home. Their attitudes towards the female role and the meaning of career were assessed using a projective questionnaire and an attitude questionnaire. A third questionnaire probed the women's childhoods and current situations. The results suggested that the women who were classified as "pioneers" (employed in male-dominated professions) were more career committed, more integrated in their roles of homemaking and working, and more generally feminist in their attitudes. In terms of personal history, these women differed from the women in traditional fields in that their fathers had more education and were more supportive of women working. A similar study of work attitudes and values was conducted by Wolkon (1972). However, this study included a group of women who were homemakers. Five years after college graduation, the homemaker group had no work history and did not plan to undertake training. Instead, they expressed a value for, and commitment to, homemaking. The "pioneer" group expressed the greatest commitment to work

and differed significantly from both the group employed in traditional occupations and the homemaking group. The latter groups were generally found to be more similar than different. The pioneer group placed more importance on independence in choosing a career, while the traditional and homemaking groups placed high value on economic return.

Wolkon's (1972) study and another study by Richardson (1974) suggest that the decision to enter a traditionally male field tends to occur in the women holding the most non-traditional sex-role attitudes and that these women can be distinguished from women who choose to work in a traditionally female vocation. Richardson's (1974) study examined a number of work-related variables in college females. The extent and importance of work in a subject's life plan, educational aspirations, field of choice, work values (intrinsic and extrinsic), and occupational information were assessed through questionnaires. The results suggested the existence of two patterns of career motivation in college women which appeared to reflect sex-role attitudes. Women labeled as career oriented deviated from the traditional feminine role in that they had long-term career goals which were central in their future plans. They had high aspirations although they did not have specific goals or particularly concrete knowledge about their occupations. In keeping with the other studies reviewed, these nontraditional women wished to enter professional areas

which were also nontraditional for women. The second motivational pattern placed greater value on family life. Although the work chosen was intrinsically interesting to these women, they did not see work as central to their lives. Unlike the career oriented women, they had specific occupational goals and concrete knowledge about their chosen occupations. As a general rule, women displaying this second pattern of career motivation, labeled "work oriented," chose traditionally feminine fields.

In general, it appears that women who enter professions identified with the male sex, hold nontraditional sex-role attitudes. Since the daughters of working women have been found to hold nontraditional sex-role attitudes, it seems likely that they would be heavily represented in traditionally masculine fields more often than women who have had a conventional sex-role model in their mother.

The literature examining the correlates of maternal employment and studies of women in traditionally masculine fields provides some evidence for the existence of a relationship between maternal employment and nontraditional vocational choices. In 1956, Douvan and Adelson conducted a national interview study on adolescent development. The sample consisted of 1,045 males aged 14 through 16 and 2,005 females in grades 6 through 12. The sample represented normal adolescents in that only adolescents in the regular school system were

studied. In discussing the results of this study (Douvan & Adelson, 1966), the authors devoted considerable attention to the differences found between the daughters of employed and traditional women. They found that the daughters of employed mothers had less traditional attitudes towards the female role, as measured by a paper-and-pencil test. In the area of vocational choice, they differed from other girls in that they were more likely to choose traditionally masculine fields and to express more commitment to their future careers. The reasons daughters of employed women gave for their particular career choice were similar to those given by the males studied, i.e., these girls saw a career as an expression of their personal identity in that the job suited their particular interests, abilities, or personality. The daughters of traditional women were more inclined to aspire to vocations which facilitated self-definition through interpersonal relations. They chose jobs which could be obtained in their home town and would not require movement away from family. They were less interested in the specific task involved in a job than in the existence of pleasant co-workers and opportunities to meet people. It appeared that the adolescent daughters of employed women were already involved in the world of work, in that, even though they were still in high school, they were more likely to be employed part-time than the daughters of traditional women.

Later studies of maternal employment and vocational aspirations of adolescents have produced similar results, although the samples have not been as large. Bacon and Lerner (1975) studied elementary school age girls from grades 2, 4, and 6. They found that maternal employment interacted with age to liberate the preadolescent girls with employed mothers from stereotypic vocational perceptions. Burlin (1976) studied the ideal and real aspirations of 11th grade females. The results suggested that the real aspiration was influenced by maternal occupational status. If the mother was unemployed or employed in a traditionally feminine field, the daughter's real aspiration was more likely to be in a traditionally women's field. However, if the mother was an innovator (employed in a male-dominated field), the daughter was more likely to see entry into a masculine profession as a real possibility for herself.

When the variables associated with vocational choice in college women have been explored, the research results have suggested that female enrolment in courses leading to a traditionally masculine vocation is related to maternal employment. Almquist and Angrist (1971) conducted a detailed study of role model influences on the career development of women over four years of college. While other models were also important in the decision to pursue a career in a male-dominated profession, the authors noted that maternal employment was

frequently found in women entering these fields. In general, these women possessed similar characteristics to the adolescent daughters of employed women studied by Douvan and Adelson (1966). They were more career-committed than those having a conventional upbringing and had more work experience both quantitatively and qualitatively. They possessed detailed information about the nature of the work in their chosen professions which came from teachers or acquaintances in these fields. Those whose mothers were not employed were more likely to show the orientation to work found in the daughters of traditional women studied by Douvan and Adelson (1966). Concern with interpersonal relationships was prominent as indicated by the higher incidence of sorority membership and engagement before graduation in this group. They were less committed to their careers and were inclined to choose occupations that they could easily leave and re-enter in accordance with family needs. They also tended to choose occupations which permitted the easy combination of family and employment responsibilities.

Another study of college women (Tangri, 1972) explored the attitudinal and demographic variables in women classified as Role Innovators, Moderates, or Traditionals, according to the percentage of women employed in the profession. The Role Innovators were studying in fields in which 30% or less of the professionals in the field were

women. At the other extreme, were women studying in fields labeled Traditional as more than 60% of the workers in the field were women. Moderate fields were not sex typed in that approximately equal numbers of men and women were employed in these occupations. The results suggested that several maternal characteristics were positively associated with Role Innovator classification. Maternal education, current employment, and maternal employment in a Role Innovator field were found to be positively related to Role Innovation in the daughter. Similarly, Snyder (1976) found a positive relationship between maternal Role Innovative employment and occupational aspiration towards Role Innovative professions in the college age daughters.

The studies reviewed here have only concerned themselves with aspirations as the women studied were still in the process of education. However, other studies of women employed in nontraditional occupations suggest that women with employed mothers follow through with their nontraditional career plans. Astin (1967) found that maternal employment was one of the personal background variables associated with current employment of women doctorates 10 years after graduation. Maternal employment has also been found to be a background variable associated with employment in the faculties of universities (Birnbaum, 1971; Graham, 1970). O'Connell (1974) studied women aged 30 to 58 years with different lifestyles. Those

with a nontraditional lifestyle in which they had combined family and employment responsibilities were likely to have had an employed mother with a high educational level. They tended to have nontraditional sex-role attitudes and to be employed in nontraditional fields. Unlike the traditional women studied, they had a strong sense of personal identity which had begun in adolescence.

In concluding this section of the literature review, it is possible to say that both the experimental literature and the research on maternal employment suggest that exposure to a nontraditional model is positively related to the development of nontraditional sex-role attitudes and behaviors, particularly for women. The experimental literature suggests that males are less influenced by nontraditional models, possibly because of the greater prestige associated with stereotypic masculine behavior. While the literature on maternal employment suggests that males exposed to a nontraditional female model in their mother develop less stereotyped sex-role attitudes, there is a paucity of literature examining the history of males engaging in behaviors sex-typed as feminine. The lack of research in this area may be due to the lesser incidence of men engaging in feminine behavior. As activities sex-typed as masculine (i.e., vocations) have traditionally been awarded greater status in society, it is not surprising that many women aspire to behaviors labeled as

masculine in society while few men wish to engage in cross-sex typed activities.

The few studies of men in traditionally feminine professions do suggest that maternal employment and/or liberal sex-role attitudes may be related to atypical occupational choice for men. Two studies of male nurses have suggested that these men have more liberal sex-role attitudes than men in other professions (Mannino, 1963; Moore, Decker & Dowd, 1978). The study by Moore et al. (1978) compared self attitudes re masculinity-femininity in male nurses versus non-nursing male students. The results indicated that the nursing students were more feminist in their self-perceptions. The Mannino study (1963) did not study sex-role attitudes directly, but suggested more liberal sex-role attitudes in that the male nurses stressed a feminine orientation towards job choice. The most frequently cited reason for choosing nursing as a career was the enjoyment of people and the pleasure in helping them. Similarly, a study of male elementary school teachers (Ellis & Cloutier, 1970) found that the most satisfied teachers placed high value on interpersonal relationships.

A study by Clayton (1970) examined the California Psychological Inventory (CPI) femininity scores of male library science students and found that their scores were higher than those of the standardization sample. A significant negative correlation existed between Fe scores and satisfaction in previous

work, suggesting that these men were not satisfied in male dominated fields.

A recent study by Valentine, Ellinger, and Williams (1975) examined the sex-role attitudes of men in library science or social work, using the Attitudes Towards Women Scale (AWS). Once again, sex-role attitudes were more liberal in men entering traditionally feminine fields as opposed to those of men entering traditionally masculine fields (i.e., law or business management). This study is unique in establishing a relationship between cross-sexed occupational choice in men and maternal employment. Thus, it seems reasonable to say that the few studies of men in female-dominated professions support the studies of females in showing a relationship between early socialization experiences, sex-role attitudes, and sex-typed behaviors.

The Trend to Liberalization of Sex-role Attitudes in the College Educated

The preceding section has produced support for the theory that sex-role attitudes are related to the type of models observed in the family during childhood. On the contrary, there is also some evidence to suggest that college educated adults are generally becoming more liberal in their sex-role attitudes when compared to earlier samples, regardless of their socialization in the home. This section will review those studies which suggest that extrafamilial experiences in the college environment may counteract earlier experience.

While constructing the Attitudes Towards Women Scale (Spence & Helmreich, 1972), the researchers compared the scores of male and female students with those of their parents. Both males and females in the student group were more liberal or nontraditional in their attitudes towards sex roles when compared to the parent group of the same sex. Another study of intergenerational studies using a questionnaire measure of sex-role ideology produced similar results (Roper & Labeff, 1977).

Several studies have used only female subjects and have suggested that college women are becoming more liberal in their sex-role attitudes. Voss and Skinner (1975) found more liberal sex-role attitudes in married and single college women when they replicated a 1969 study of self-ideal and man's ideal women during 1973. Hanson (1975) found similar results in a study of sex-role attitudes in college women seeking counseling, women's liberation members, and other college women. While the on- and off-campus women's liberation groups held the most liberal or nontraditional attitudes, all groups held self and ideal woman attitudes which tended towards the nontraditional pole. Grolith (1976) found that college age women viewed women in a favorable light in that they saw women as equal or superior to males in such characteristics as intellect, motivation, and assertion.

It appears that male and female college students have favorable perceptions of individuals who express preference for liberated sex roles. Male and female subjects were asked to rate hypothetical individuals of both sexes who expressed liberal or conventional sex-role preferences on the Interpersonal Judgment Scale. No significant differences were found between the ratings of male and female subjects. The view of individuals expressing liberated preferences is one of high intelligence and knowledgeability of current events yet less morality than would be found in more conventional peers. It is interesting to note that the only difference found between the perceptions of males and females expressing the liberated view was with regard to intelligence. The liberated female was perceived to be more intelligent than the liberated male although the protocols presented were virtually identical. It would appear that liberated women have achieved not only equality but also superiority in the population tested in this study (Banikiotes & Banikiotes, 1972).

The studies of sex-role attitude change towards a more liberal stance reviewed thus far have focused principally on changes in female attitudes. Although there is some evidence that male attitudes are becoming less stereotyped, it appears that the degree of change in male attitudes is less than that found in females. Both Spence and Helmreich (1972) and Roper and Labeff (1977) found significantly more

liberal attitudes in college age men when compared with their fathers. However, the difference was not as great as that between mothers and daughters. A study of adolescents (Entwistle & Greenberger, 1972) also suggested that males were more traditional in their sex-role attitudes.

When the specific area of career commitment has been examined, the results suggest that men are generally accepting of women working except when preschool children are involved (Almquist, 1974; McMillar, 1972). In both studies less than 15% of the college men surveyed did not want their wives to work under any circumstances. Almquist (1974) also surveyed females and found that the women were more favorable than the men towards work after children passed the preschool age. These results support the results of the more general ideology studies in suggesting that, while men are becoming more liberal in their sex-role attitudes, they lag behind women in their degree of change.

The sex-role attitudes of males have also been examined through female perceptions of male attitudes towards women (Kaplan & Goldman, 1973; Parelius, 1975a; Rappaport, Payne & Steinmann, 1970; Voss et al., 1975). The results of these studies suggest that women view men as more conservative than women in sex-role attitudes. The Rappaport et al. (1970) study found that both single and married college females saw men as being more traditional than themselves in their

descriptions of man's ideal woman. Although the Voss et al. replication of this study (1975) found significantly less traditional ratings in the single women's perceptions of man's ideal woman in 1973, both single and married women in the 1973 sample still tended to see man's ideal woman as more traditional than their own ideal.

There is some evidence to suggest that the female perception of male ideals regarding women is actually more conservative than the ideals expressed by men. The Kaplan and Goldman (1973) study asked both males and females to rate the average man's and woman's attitudes towards women. Both males and females expressed the view that the "average man" was more conservative in his attitude towards women than was the "average woman." However, female subjects perceived more discrepancy between the ratings of the "average man" and "average woman" than did the male respondents.

A study by Parelius (1975) sheds some light on the areas in which females perceive change or continuity in male attitudes in recent years. Female perceptions of male attitudes in 1969 were compared to those found in 1973 in three major areas: work and financial responsibility, divisions of labor at home, and importance of marriage and family relative to other goals. In both samples, women saw few men as feminist in their attitudes. The area perceived as receiving most masculine support was that of female participation in

work and financial responsibilities. Few changes were perceived between 1969 and 1973, excepting greater support for women's inclusion in work and financial responsibility. The results also suggested that, in both samples, women were more likely to express feminist views than to believe that men wanted to marry women expressing such attitudes.

In summary, it may be said that women seem to perceive men as changing to a more liberal orientation to sex roles, but as lagging behind women in their rate of change. There is also some suggestion that women may exaggerate this lag as studies which have included males have suggested that the women's perception of male attitudes is generally more traditional than the attitudes actually expressed by their male peers. There are two possible explanations for this discrepancy. On the one hand, women may truly be underestimating the extent of male attitude change towards sex roles. On the other hand, men may be responding to feminist pressure and thus expressing more liberal attitudes than they actually are prepared to act upon. O'Leary and Depner (1975) asked male and female students to rate themselves and ideal members of the opposite sex on a bipolar sex-role questionnaire. Although both male and female self-ratings and female ratings of the ideal male conformed to traditional sex-role stereotypes, the men's ideal woman did not. The males rated the ideal female as having numerous traditionally

male characteristics (i.e., competence, competitiveness, success). The authors suggested that these men were over-compensating in their desire to avoid the "male chauvinist pig" label. Another study by Harris and Lucas (1976) suggests that among the highly educated (i.e., social work graduate students), healthy males were rated as less masculine than healthy women. These results present a marked contrast to those obtained in the earlier study upon which the study reported was based (Broverman, Broverman, Clarkson, Rosenkrantz & Vogel, 1970).

Since the literature has indicated that the college-age men and women of today are more liberal than their own parents, it seems likely that they have been influenced by experiences that they have had outside the family environment. There is some evidence to support the suggestion that sex-role attitudes can be modified by influences outside the home during adolescence and early adulthood. A study of occupational sex stereotyping in four age groups (Shepard & Hess, 1975) suggests that adolescents and young adults are particularly susceptible to changes in sex-role attitudes in society. Kindergarten children, 8th grade children, undergraduates, and middle-aged adults of both sexes were asked to rate 44 occupations as to their appropriateness for males, females, or both sexes. As is typical, females of all ages except kindergarten tended to be less traditional. Significant age differences were found indicating a trend to greater

liberalism among 8th grade children and college students. The authors explained the greater conservatism of the kindergarten children by suggesting that the children were more dependent on parental models for their sex-role attitudes than were the 8th graders and college-age students. As the majority of parents still model traditional roles, the children have more traditional attitudes. The conservatism of the middle-aged adults was explained by the fact that these adults had considerable investment in the status quo of traditional sex roles. In the authors' opinion, the 8th grade and college students expressed more liberal attitudes because they were hindered by neither of the aforementioned constraints.

Longitudinal studies of college students suggest that changes in sex-role attitudes and related behaviors do occur during the college years. Angrist (1972) and Parelius (1975b) studied orientation towards the future in college women over time. The Angrist (1972) study followed students over a 4-year period, while Parelius (1975) studied two random samples of the entire student body in 1969 and 1973. While half of the student body remained consistent in their attitudes towards the future, Angrist (1972) found that the rest changed, usually towards a more feminist ideology. Parelius (1975) found that the students surveyed in 1973 were more liberal than the 1969 sample. This liberalism was not solely the result of more liberal freshman responses. When the scores of

women surveyed as freshmen in 1969 were compared with those of seniors surveyed in 1973, the seniors were found to be more liberal, suggesting that this group of women had become more liberal in their sex-role ideology during the college years.

Etaugh (1975) criticizes the results of studies employing the type of design employed by Parelius (1975b) because the same individuals are not tested at freshman and senior years. A test-retest study using the AWS and employing t tests for correlated means and Pearson product correlations for each class and sex found no significant differences in either comparison over a year's time. As a result of this study, Etaugh suggests that the shift towards liberalism seen in some studies may be a result of the selective drop-out of traditionally oriented women. A 2-year follow-up study (Etaugh, 1976) of enrolled and nonenrolled students of both sexes gave some support to this theory. At each of the four years of college, the nonenrolled females were more traditional than the enrolled females, while the opposite relationship held for men. These results did not attain the level of statistical significance and are somewhat contradicted by the fact that enrolled men became progressively more liberal at higher levels of study, though they were not as liberal as the drop-out males.

Research attempting to evaluate the effectiveness of women's studies courses has also produced some evidence to suggest that sex-role attitudes may be altered within the

university environment (Lunneborg, 1974; Rapin, 1974; Ruble, Croke & Frieze, 1975). Lunneborg (1974) reports few drop-outs in her sample, yet significant changes on the AWS were reported. Rapin (1974) did not report drop-out rate but a control group was used and significant differences were found. Similarly, Ruble et al. (1975) did not report drop-outs but did comment that the greatest changes occurred among the more traditional subjects who had taken the course, suggesting that those who might have been more resistant to the course had not dropped out.

In summary, it may be said that the literature suggests that college age adults are becoming more liberal in their sex-role attitudes. It appears that college students may acquire their liberalism during the adolescent and early adult years when they are exposed to models other than their parents. However, there are some indications that this phenomenon is confined to the college educated and that those who do not receive higher education may deviate less from their parents in their sex-role attitudes. When women's caucus members, undergraduates, employed clerical workers, and nonworking women were compared in their ratings of the relative prestige and appropriateness of various occupations for women, significant differences were found among the groups (Medvene & Collins, 1974). While the four groups agreed as to the relative prestige of the jobs listed, the women's caucus group, followed by the female students,

was less likely than the employed and nonworking women to see the medium and low prestige occupations as appropriate for women.

Saarni (1976) employed a similar design and examined the relationship of social cohort to masculinity-femininity scores, and self reports of the subject's own sense of femininity. Four groups of women, ranging in age from 19 to 49 years, were tested. Active feminists, introductory psychology students, nursing students, and skilled workers were given four questionnaires and were asked for demographic information. Marital status bore no relationship to the results. Cohort membership and education were related to the scores, the feminist groups being the most masculine. No significant differences were found between the two groups of students, while the skilled workers were found to be significantly less masculine on all measures except self-report when compared to the introductory psychology students. Education seemed to bear the most powerful relationship to masculinity as the feminist group, found to be the most masculine, was also the most educated. Thus, in the samples studied, the differences among the cohorts would appear to be related to their relative levels of education. Whitehead and Tawes (1976) found a similar relationship between education and support of feminism.

Saarni (1976) summarizes a basic problem in the relationship between sex-role attitudes and sex-role behaviors in the discussion of his results. He comments:

What is interesting to consider is which came first: their relative masculinity which may have facilitated their educational achievement, or their educational achievement which may have provoked greater masculinity (p. 1118).

The literature reviewed in the second section of this chapter suggests the former. Academic achievement and occupational choice, two sex-typed behaviors, appear to be related to sex-role attitudes acquired in the home. However, the literature reviewed in this section suggests that, for women in particular, engaging in nontraditional sex-role behavior such as higher academics may modify sex-role attitudes acquired at home to a more liberal stance. The following section of this review attempts to shed some light on this controversy.

The Relationships between Expressed and Covert Measures
of Sex-role Attitudes and Behavior and Early
Socialization

The literature reviewed in the third section of this chapter has suggested that expressed sex-role attitudes are related to sex-typed behaviors. For the purposes of this review, expressed sex-role attitudes will be defined as those which can be measured by asking the subject directly to express his/her attitudes towards sex roles. Historically, those who have developed nontraditional attitudes seem to have

been exposed to nontraditional models. However, there is some evidence to suggest that exposure to nontraditional models during childhood may bear less relationship to the development of nontraditional sex-role attitudes today as the majority of university students surveyed since 1970 have expressed non-traditional or liberal sex-role attitudes. This trend might lead the reader to conclude that this population is also becoming less sex stereotyped in their behaviors. This section of the literature concerns itself with the relationships between expressed sex-role attitudes and sex-role attitudes which are measured less directly and may, therefore, be considered to be less conscious or covert. Secondly, the relationships between sex-role attitudes measured directly or indirectly to sex-typed behaviors will be examined.

Recent studies of college students suggest that there may be little relationship between the expressed liberal attitudes and actual behavior. Travis (1973) surveyed readers of Psychology Today regarding their attitudes towards women's roles. The sample of respondents were found to be representative of subscribers, although they tended to be younger. Psychology Today readers tend to be better educated and to have higher incomes and more liberal political and religious attitudes than the general public. In other words, they are described as being similar to the college samples who have been studied since 1970. While 73% claimed to approve of egalitarianism

in housework and child care, only 15% of the sample said that their behavior reflected these attitudes. Similarly, Stafford, Backman, and Dibona (1977) found that most of the cohabitating and married college students surveyed followed the traditional division of labor in the home.

The experimental literature since 1970 gives further evidence to suggest that actual behavior is inconsistent with the liberal attitudes expressed. Several studies have examined the perception of personal characteristics of individuals in nontraditional occupations held by college students (Babladelis, 1973; Garske, 1975; Harris, 1975, 1976). The results of these studies suggest that both male and female subjects agree that when either men or women take on occupational roles usually held by the opposite sex, they possess personal characteristics which are stereotypic for the opposite sex. Babladelis (1973) found that women professors were seen as having similar characteristics to male professors, not to women in general, while Garske (1975) found that female graduate students were seen as more masculine than undergraduates and adult females who were described in stereotypic terms. Harris (1975) found that a male teacher employed in the nursing school was viewed as more feminine than the male employed by the engineering faculty. The Harris (1975, 1976) studies suggest that the stereotypes projected are related to associations between masculinity and competence. In both studies, the individuals

who had feminine characteristics, regardless of their actual sex, were rated as less competent. In other words, it seems possible to suggest that these students projected masculine characteristics on to women succeeding in masculine fields because they did not believe that a woman possessing "feminine" traits could be competent in a masculine field. Although these students come from the generation that has expressed a desire to move away from traditional sex roles, these studies, which have not directly and openly asked the students for their sex-role attitudes, suggest that the change may be more apparent than real. These studies and those which follow suggest that covert or less conscious conservative attitudes are operating to produce conservative behavior.

Studies which have examined the personal characteristics in men and women related to likability indicate that women who behave in a nontraditional manner are rejected by both men and women. Kristal, Sanders, Spence, and Helmreich (1975) asked students of both sexes to rate the likability and femininity of women with different patterns of interests and personal characteristics. While competent women who had masculine interests were more desirable than those with feminine interests, this effect only held when the woman was also described as having traditional "feminine" personality characteristics. If no personality characteristics were described, it was assumed that the person was "feminine" in personality. This study, in

combination with the studies of perceptions of persons in nontraditional roles, suggests that masculine characteristics are awarded to women in nontraditional roles but that these women may not be liked.

While the Kristal et al. (1975) study suggests that college students have liberal attitudes towards women engaging in masculine roles if not towards women possessing masculine personalities, there are other studies which suggest that these results may be a product of the experimental design. Research studies which examine greater commitment to "live with" the opinions expressed produce different results.

Entwistle and Greenberger (1972) studied the sex-role attitudes of adolescents from varying SES backgrounds and races. The students were queried as to their opinions regarding female employment and what kind of jobs women should hold. The results suggested that the white, middle-class males were the most conservative in their sex-role attitudes. The authors interpreted these results as a product of the degree of threat posed by women working, particularly in traditionally male jobs. The authors inferred that the blue-collar boys were not threatened by female employment as they did not expect to acquire high status jobs and therefore did not worry about losing prized positions to women.

Studies of sex-role attitudes within marriage using older subjects have also shown liberal attitudes only at the

abstract level. Komarovsky (1973), using intensive interviews, found contradictions between liberal ideology and what men wanted from their own wives. This inconsistency was also suggested in another study by Hipple (1976). According to the results of this study, single men professed more nontraditional ideals for their ideal women than did married men. Possibly the reality of marriage made these married men more aware of the extent to which they were willing to alter traditional sex roles. Similarly, Schmid (1975) found that married students of both sexes felt that women and men were similar in traits but that women should be family oriented.

Lerner, Benson, and Vincent (1976) found that the discrepancy between ideals and personal life extends itself into the vocational planning sphere. A study of elementary school children in grades 4 to 6 indicated that, while males and females gave egalitarian responses as to the appropriateness of various activities and jobs for each sex, the majority aspired to occupations traditional for their sex. It is important to note that females showed greater discrepancy between what they would like to do and what they actually expected to do.

The experimental literature also indicates that college students are considerably more liberal in their sex-role attitudes when they are not actually asked to follow through on their liberalism. Hagen and Kahn (1975) found that, while both men and women students professed to like competent women, men in

particular do not like to interact with a competent woman. Both men and women were willing to observe a competent woman, but they would reject her from a cooperative group although they would not reject a competent male. Men who expressed very liberal beliefs on the AWS were less likely to act this way. However, there is no indication that most AWS scores were any more conservative than is generally found in the college population. Therefore, it appears that only extremely liberal scores on the AWS were indicative of behavioral commitment to liberal sex-role attitudes.

Appleton and Gurwitz (1976) also found reluctance to actually interact with nontraditional individuals. Students were asked to indicate their willingness to help a new student in three ways. At the one extreme, no personal contact was demanded. The subject merely committed himself to writing a letter to the new student. At the other extreme, the subject agreed to have a personal interview with the individual. A telephone call represented the intermediate level of interpersonal contact. The descriptions of the new student given to the subjects varied as to the sex-role appropriateness of the student's occupational goals. Although the results did not support the expectation that direct interpersonal contact with the nontraditional student would be avoided, avoidance was suggested in the commitment of significantly less time to the nontraditional student. Although both sexes followed this

pattern of avoidance, the tendency was more pronounced in male students.

The studies of reactions to nontraditional individuals on the part of college educated adults described thus far present a complex picture. It appears that those who assume non-traditional roles are seen as having personal characteristics found in the opposite sex. Although there are some indications of acceptance of these individuals, it appears to be rather superficial in that rejection of nontraditional people occurs in situations demanding actual contact with such people.

Studies of the expectations for, and reactions to success and failure in men and women constitute another area of study in which sex-role attitudes are elicited without the subject's awareness. In 1967, Goldberg assessed reactions to male and female achievements by having articles supposedly written by men or women rated for their quality. The women subjects tended to rate articles presented as written by men as superior although all articles had been previously rated as equivalent. Studies since 1970 indicate that women are still considered as less likely to succeed by college students despite the supposed egalitarianism of this population. Pheterson, Kiesler, and Goldberg (1971) designed a study to explore the judgments of men and women attempting to succeed and after success against varying odds. The female college students rated eight paintings for competence, creativity, emotional

impact and future of the artist. Biographical sketches of male and female artists who had experienced varying amounts of difficulty in their lives accompanied the paintings. Also included with each painting was information pertaining to the success of the artist. In some cases, the picture was presented as currently entered in an art contest, while in other cases the picture was presented as a prize winner. Although each painting was judged under all conditions, the paintings were rated as superior if the artist was male. Ratings of competence and artistic future also favored the male painting. These effects were found only in the art contest entry condition, not in the prize winning condition. These results suggest that the judgment of an individual's work may be influenced by the expectation that men will achieve, whereas women will not if the situation is ambiguous (success has not actually been obtained). Similar results were obtained by Feldman-Summers and Kiesler (1974). They found in two studies that less success was expected for females even if the occupational field was varied as to its relative "femininity." Another study by Cline, Holmes, and Werner (1977) contradicted these results by suggesting that men discriminate against women and vice versa. Freize (1975) has reviewed the literature in this area and has concluded that, in general, men are expected to achieve greater success than women, even in feminine fields.

Reactions to the success or failure of men and women on the part of college age adults is also indicative of conservatism. Several studies have indicated that different reasons or attributions are given for success and failure in women. Some attributions relate success or failure to the characteristics of the individual (e.g., effort, ability), while other attributions relate success or failure to external factors over which the individual has no control (i.e., task difficulty, luck). Taynor and Deaux (1973) and Deaux and Emswiller (1974) have examined the reactions of both sexes to men and women succeeding in areas which are traditionally sex-inappropriate. Where a female performed successfully in a masculine situation, she was seen as having given more effort (Taynor & Deaux, 1975) or as having been lucky (Deaux & Emswiller, 1974). Men succeeding on female tasks were not viewed differently from women succeeding in these areas. Men were generally seen as more skillful than women regardless of the nature of the task (Deaux & Emswiller, 1974) and as having made more effort and possessing more ability as compared to women when assigned a passive role (Taynor & Deaux, 1973).

Feldman-Summers and Kiesler (1974) found similar results in their study. Sex of stimulus person, sex appropriateness of success, and environmental factors were varied in their study. Regardless of these variations, the successful female was always seen as having put forth greater effort

than the male. Although this held true for both sexes, other sex differences in attributions were found. ~~Males~~ judging a successful female, saw her as less able than males but either more motivated or, if her circumstances were pictured as particularly fortunate, as having an easier task. Women subjects thought males and females were equal in ability, but they attributed male success to an easier task and female success as due to greater effort regardless of environmental circumstances.

Another study, using female subjects only (Feather & Simon, 1975), also varied the sex-appropriateness of occupational fields and found that the subjects saw men as personally responsible for success, while women were personally responsible for failure. Freize (1975) suggests in her review that women generally behave like men of low self-esteem, relying on luck to explain success and luck or lack of ability to explain failure.

These studies of attribution suggest that both sexes tend to make attributions regarding success and failure which are indicative of traditional sex-role attitudes. Women are not usually attributed the personal qualities required for success (e.g., ability or skill) and if they do succeed they are seen as either overcoming a lack of ability (e.g., effort attribution) or are denied any responsibility for success in that it is explained by unpredictable external causes (e.g., luck). Expectation of male success is indicated in that men are

perceived as having the personal qualities required for success (e.g., ability) and are held responsible for their success or, more importantly, for their failures. Male failure seems to be attributed not to lack of ability but to lack of effort.

Reactions to success also include judgments of the satisfaction of the succeeding males or females. Feather and Simon (1975) found that failure was seen as producing bad consequences for males, while success had detrimental effects for females. A later study by Feather (1975) indicated that both sexes were thought to be happiest when succeeding in sex-appropriate areas and most unhappy when failing in sex-appropriate areas. Again, these judgments suggest that success is considered to be more typical of males.

No review which considers sex-role attitudes and reactions to success would be complete without some mention of Horner's (1968) work on the projective "motive to avoid success" theme. In 1964, Horner presented men and women with a stimulus sentence in which a female was presented as succeeding in a traditionally masculine field. The subjects were asked to write a story about the future of the nontraditional student. Some 65% of the females saw negative consequences for the nontraditional female with particular emphasis on affiliative loss. In general, the stories judged as reflecting the motive to avoid success conformed to the traditional stereotype of femininity which does not see achievement as appropriate to females.

Since Horner's (1968) publication of her discovery of this motive, a great deal of research has focused on the Ms motive. However, it has been difficult to draw firm conclusions about the correlates of this motive. The studies which have been reviewed in this section have elicited behaviors which reveal covert or less conscious sex-role attitudes. The Ms measure is also an indirect method of measuring sex-role attitudes. However, the relationship to behavior has proved to be ambiguous. Tresemer (1976) has reviewed 200 studies using the Ms test and has found a relationship to behavior in some studies but not in others. Although it cannot be assumed that results on this measure relate to behaviors as do the studies previously reviewed, they should be noted as they are an indirect measure of sex-role attitudes. Although these results should be interpreted cautiously, it is still interesting to note that the Ms motive has not disappeared from stories written by college students despite the change in sex-role attitudes which has supposedly occurred in this group. Tresemer (1976) notes in his review that Ms stories written to the female cue have declined for both men and women in the years 1969 to 1975. Nevertheless, approximately half of the samples studied in these years still wrote Ms themes.

Another projective study of sex-role attitudes also indicates little change in the last generation (McInerney, 1976). Comparison of TAT protocols of boys and girls ages 9

through 11 suggested that there were few appreciable changes over 20 years when the stories were scored for masculine and feminine values, preferences, and interests.

In general, the studies of indirect measurement of sex-role attitudes suggest that there is a discrepancy between expressed and less conscious attitudes in college students. It also appears that the less conscious attitudes bear a stronger relationship to behaviour than do the expressed attitudes. Occasionally, researchers have measured sex-role attitudes using both direct and indirect measurement. These studies will be reviewed in the following sections.

Spence, Helmreich, and Stapp (1975) rated subjects on their expressed sex-role attitudes using the AWS. The subjects, both male and female, were then exposed to videotapes with stimulus persons who varied in sex, competency, and masculinity or femininity of interests. Following the stimulus, the subjects rated the likability of the stimulus person. One group of subjects rated the SP immediately after viewing the tape, while the other group first responded to a series of open-ended TAT-like questions about the SP. The results in the first condition were similar to those found in the Kristal et al. (1975) study discussed earlier in this review. Competent individuals were preferred, regardless of sex or sex-typing of interests. In the projective condition, however, only the female subject having extremely high scores on the AWS

continued to prefer the competent female who had masculine interests. The other groups reversed their ratings and preferred the feminine competent female. The authors suggest that:

For the Conservative groups, male and female, this reversal may simply indicate that under more sensitive testing and conditions, factors related to the congruence between the SP's presumed interests and attitudes and those of the S began to exert some influence (p. 106).

Another study by Goldberg and Gottesdiener (1975) also found a discrepancy between expressed and covert attitudes. The subjects, who were male and female college students, were given 30 pictures of female students. They were told that one-half the pictured women were feminists. They were then asked to judge, using the pictures, who were the feminists. After this task was completed, the subjects were given a questionnaire designed to examine their attitudes towards women's liberation. Although a previous experiment, using the 30 pictures, had found no differences in the attractiveness of the women who were in fact feminists and those who were not, the subjects in this experiment chose the less attractive women as the feminists. There were no differences between male and female subjects in the tendency to downgrade the attractiveness of feminists. While these subjects displayed a prejudicial attitude towards the attractiveness of feminists, which implied that only those who are failures with the status quo (i.e.,

unattractive) would support women's liberation, they expressed liberal sex-role attitudes.

A study of humor preference (Losco & Epstein, 1975) differs from the results of other studies comparing expressed and covert sex-role attitudes in finding a positive relationship between the two. The subjects in this experiment were again college males and females. They were asked to rate 11 cartoons on a 15-point scale for their relative capacity to amuse. Seven cartoons were "filler" items. The other four cartoons, which were used to provide the experimental results, were hostile in nature. Three cartoons showed an act of unprovoked hostility, while the remaining cartoon showed an act of provoked hostility. These four cartoons were presented in two sets. In one version, the male was the target of hostility in the four cartoons, while in the other set a female target was employed. Both male and female subjects rated each set. Only the cartoon showing an act of provoked hostility produced significant sex differences. This particular cartoon showed a retaliation against a provocative person in authority. Male subjects found the cartoon very amusing if the target was an officious female. However, their reaction was markedly reversed for the cartoon in which the target was male. Females, on the other hand, found no significant difference between the cartoons in their ability to amuse. The authors found these results to be consistent with the subjects' expressed sex-role

attitudes which were assessed in ratings of the average and ideal man and woman. Both sexes rated the average man as more competent than the average woman. While women appeared to wish that the discrepancy be reduced as indicated in their ideal woman ratings, men would like to see it retained. Sex differences in the reaction to the cartoons were explained by the implication in ideal ratings "that females have less of an emotional investment in female dominance than males have in male dominance" (p. 330). A minority of females did differentiate between the cartoons, preferring a male target. Again, their response appears to be related to their expressed sex-role attitudes. These subjects showed more discrepancy between average and ideal ratings of men and women, although their ideal ratings were similar to the other women's. The authors suggested that these women saw a great discrepancy between males and females, disapproved of this discrepancy, and therefore directed hostility towards men.

Numerous studies have attempted to relate the Ms measure to expressed attitudes towards sex roles. If expressed and covert attitudes are related, one would expect that Ms scores would be positively related to sex-role traditionalism as women are thought to write fear of success stories because they endorse the traditional view that success in male dominant fields is inappropriate for women. Tresemer (1976) concludes in his review that Ms has shown no relationship to gender role

identification, but points out that different questionnaires have been used. Despite this problem, however, the number of conflicting results is impressive. Alper (1973), Calef (1972), Coleman (1974), and Hopkins (1974) all found a positive relationship between expressed sex-role traditionalism and Ms scores, while Grainger (1971), Miller (1972), Zanna (1973), Deinhardt (1973), Breedlove and Cicerelli (1974), Peplau (1974), and Stericker (1975) found no relationship between sex-role traditionalism and Ms scores. One study (Caballero, Giles & Sharon, 1976) found results which contradict the theoretical explanations of fear of success. In this study, women expressing liberal sex-role attitudes were more likely to write Ms stories.

The studies reviewed in this section suggest that the relationship between expressed sex-role attitudes and indirectly measured attitudes is unclear. Experiments which have elicited sex-role attitudes and behaviors without revealing the nature of the experiment to the subjects have often suggested that, despite the liberal expressed attitudes found in this population, the subjects hold conventional attitudes and behaviors when this type of measurement has been employed. Research which has compared expressed attitudes with more subtle measures within the same populations fluctuates in demonstrating this inconsistency. Both types of experiments do

seem to suggest, however, that it is the less conscious attitudes which influence behavior and that indirect measurement must be used to get at these attitudes.

There is some evidence to suggest that the inconsistency between expressed and covert or less conscious attitudes does not exist in individuals who have been exposed to non-traditional models from an early age. Failure to control for this variable may account for the inconsistent results in studies comparing expressed and less conscious attitudes. Some of the studies showing consistency between expressed and less conscious attitudes in children of employed mothers will now be reviewed.

The study by Douvan and Adelson (1966), which has been reviewed previously, suggested that males and females differ in their orientation towards work. The authors suggested that these two orientations are a subtle reflection of sex-role attitudes. The masculine orientation, which views work as an expression of personal identity, and the feminine orientation, which views work as an avenue to interpersonal relationships, appear to reflect the instrumental and expressive qualities, respectively, which have been associated with masculinity and femininity (Parsons & Bales, 1955).

These orientations can be properly viewed as covert sex-role attitudes since questions regarding the reasons behind vocational choice are not direct measures of sex-role attitudes

in that the subject is not aware of the true purpose of the questions. The research suggested that the daughters of employed mothers differed from the daughters of traditional women in their orientation towards work. Since they were also seen to be less traditional on a paper-and-pencil test of femininity, it can be said that they were consistent in their nontraditional sex-role attitudes regardless of the method of measurement.

Baruch (1972) tested college women and found an inconsistency between expressed and less conscious attitudes in women whose mothers had not worked. This inconsistency was not present if the subjects' mothers had been employed. Expressed attitudes were measured using a questionnaire, while less conscious attitudes were measured using a replication of the Goldberg (1967) study. The sample as a whole displayed a feminist orientation on the questionnaire, but the daughters of unemployed women were inclined to downgrade the competence of women in their ratings of female achievements.

Some studies have related Ms to maternal employment. Baruch (1973b) and Jordan (1973) found no relationship between Ms and maternal employment, while Peplau (1974) found a negative relationship between Ms and maternal employment. Patty and Shelley (1974) also found a negative relationship between Ms and maternal employment, but only in those cases where the mother was employed in atypical fields.

The discrepancy in the results obtained relating maternal employment to Ms may be explained by the differences in age found among the samples, since studies which have found no relationship between the variables have used subjects who were in elementary or early high school years. Romer (1975) has found some evidence to suggest that Ms becomes more prominent with age. In keeping with Romer's study, few of Baruch's (1973b) or Jordan's (1973) subjects wrote Ms stories. Alternatively, the lack of a relationship between maternal employment and Ms may be explained by the small samples used in these studies.

Other studies which have looked at correlates of Ms also provide some support for the theory that women who had mothers who were employed are consistently liberal in their sex-role attitudes, regardless of the method of measurement. The studies to be discussed here refer to "real life" behaviors (academic major, vocational choice, or academic aspirations in college females). Discussions of achievement behavior in lab experiments will not be discussed since it is not known whether these two types of behavior are necessarily related. The studies reviewed here have not controlled for maternal employment. However, it seems possible to suggest that had this variable been controlled, results similar to those of Peplau (1974) and Patty and Shelley (1974) would have been found. In these studies, Ms has been found to correlate

negatively to a significant degree with variables previously discussed in this review as related positively to maternal employment.

Tangri's (1972) study of nontraditional occupational choice demonstrates these relationships. In her study, the relationship between Ms and maternal employment was not examined, but Ms was found to be negatively related to nontraditional vocational choice which was, in turn, positively related to maternal employment. Studies by Schwenn (1970) and Horner (1972) found a low incidence of Ms in women choosing nontraditional majors. Veroff, McClelland and Marquis (1971) found a significant negative relationship between years of education obtained and Ms in white women. Stewart (1975) found the Ms was negatively associated with working after marriage and was positively correlated with marriage and large families. Research in a subculture which has had a higher incidence of maternal employment (black American) has shown a low incidence of Ms in female subjects (Weston & Mednick, 1970). On the other hand, no relationships were found between traditionalism of college major and Ms in studies by Moore (1972) and Breedlove and Cicerelli (1974). In general, however, the literature appears to support the idea that a life pattern associated with maternal employment does not tend to be associated with Ms.

Perhaps the differences found between the children of working mothers and individuals receiving a traditional

socialization at the level of indirectly measured attitudes may be explained by the suggestion that these attitudes are acquired during childhood and are deeply rooted and hence more difficult to change than conscious attitudes. Freud (1949) suggested the importance of early experience in personality formation. Ausubel (1969) has also suggested that early experience is of critical importance. He states that "developmental experiences such as satellization in early childhood, leave a permanent residue in personality structure that either affects adult behavior covertly, or is perpetuated more overtly as a current form of adult status-seeking activity" (p. 117).

Maier (1963) emphasizes the differences between developmental psychologists and social learning theorists regarding the relative potency of early and later learning in his comparison of social learning theorist, Robert Sears, with developmental theorist, Erik Erikson. He describes the social learning theorist as considering "only the latest social experiences as the major behavioral determinants which replace or reinforce previous behavior" (p. 186), while he sees the developmental psychologist as believing that, "regardless of subsequent events, early experiences make a vital impact upon the child, and continue to mold the direction of future behavior" (p. 186).

If the developmental theory view of early experience is accepted, it seems reasonable to suggest that the same-sex

parent should be the most powerful model. Later models should produce only superficial changes in attitudes and behaviors. A study by Dorn (1975) supports this suggestion. He tested the influence of sex-role awareness groups on college women using several types of measurement. Sex-role attitudes were measured using the AWS and, indirectly, using the Ms, while achievement behavior was measured using the Scrambled Word Test and the Generation Anagrams Test. Both control and experimental groups were pretested and posttested. While directly measured attitudes changed in the experimental groups, indirectly measured attitudes and achievement behaviors remained unaltered. The results of this study suggest that expressed sex-role attitudes may change during the college years, but that the less conscious attitudes will not change. It also suggests, as have other studies reviewed, that in recent years less conscious sex-role attitudes are more related to behavior than are expressed attitudes. It appears that expressed sex-role attitudes have become a type of social desirability response among the college educated in recent years and can no longer be seen as bearing the relationship to behavior which was formerly found.

Summary, Rationale, and Hypotheses

The review of the literature on maternal employment and the effects of the Women's Liberation Movement on sex-role

attitudes and behaviors has led to several conclusions. Exposure to nontraditional sex-role models (employed mothers) is related to nontraditional sex-role attitudes and behaviors. Secondly, it appears that this effect is most pronounced in females. Thirdly, sex role attitudes are becoming more liberal in the college population. Again, this trend is most pronounced in females. However, more subtle measures of sex-role attitudes suggest that less conscious or covert attitudes have not changed greatly in the college population.

This study attempts to use social learning theory to explain these empirical findings and to reconcile some apparent contradictions arising from the literature cited earlier. The review of the research on modeling suggests that certain model characteristics such as nurturance (Bandura & Huston, 1961) and control of reinforcements (Bandura, Ross & Ross, 1973b; Mischel & Grusec, 1966) facilitate imitation by children. As normal parents possess both characteristics found to facilitate modeling, it seems reasonable to conclude that parents should be particularly potent models for the child.

Although both parents should be powerful models for the child, social learning theory research (Hetherington & Frankie, 1967; Mussen & Distler, 1959; Payne & Mussen, 1956) has suggested that the same-sex parent is the more potent model of the two parents. The perception of similarity between model and observer has been found to be related to imitation

(Bandura & Mischel, 1965; Bandura, Ross & Ross, 1973b; Hicks, 1965). Thus, the modeling influence of the same-sex parent seems to provide a reasonable explanation as to the manner in which sex-role behaviors are transmitted from one generation to the next.

Although other models may influence development in school and young adult years, research cited previously has suggested that later experiences are less powerful than those of early childhood (Ausubel, 1969; Freud, 1949; Maier, 1963). As a result, it seems reasonable to conclude that parental models should be more important than later models. A study by Dorn (1975) has suggested that exposure to models in adult life produces only superficial attitude change.

Since college-age students were young children some years before the Women's Liberation Movement (i.e., 10 to 15 years ago), it is likely that their parents generally provided traditional sex-role models. Because these college-age students observed traditional male and female models, it is expected that sex differences in sex-role attitudes will be found in the subjects of this study.

However, since the Women's Liberation Movement has challenged traditional sex roles, it is possible that the conscious attitudes of these students may have changed, causing a decrease in sex differences in expressed attitudes. However, it seems possible to suggest that sex differences in sex-role

attitudes should be more pronounced at the covert level. As the covert attitudes are less subject to conscious control, the attitudes formed from experiences with the powerful parental models may be more entrenched at this level. It is expected that these differences will occur on a general measure of covert sex-role attitudes and in the orientation towards occupational choice, to the extent that it reflects sex-role stereotypes.

Researchers have discovered masculine and feminine orientations towards occupational choice (Douvan & Adelson, 1966) which they have viewed as covert expressions of sex-role attitudes. The masculine orientation views work as important to personal identity. As a result, occupational choice revolves around appropriate matching of the job and the individual. The feminine orientation views interpersonal relationships as important to personal identity. Therefore, occupational choice is based on the characteristics of the job which will facilitate interpersonal relationships. These orientations appear to be related to the "expressive" and "instrumental" stereotypes of femininity and masculinity, respectively, proposed by Parsons & Bales (1955).

These expectations have been formulated into the following hypotheses:

1. When covert sex-role attitudes of men and women are contrasted using the masculine oriented factors of the OCQ and Gough Fe, men will obtain higher scores.

2. When covert sex-role attitudes of men and women are contrasted using the feminine oriented factors of the OCO₂ and Gough Fe, women will obtain higher scores.

The preceding section of the rationale has suggested that the same-sex model is the most powerful model influencing the individual's sex-typed behaviors and attitudes. Although the college students of today experienced their early socialization before the Women's Liberation Movement, nonetheless, some mothers of current college-age population worked. In taking employment, these mothers presented a less traditional sex-role model to their daughters than did the nonworking mothers. As economic support of the family through a vocation has traditionally been associated with the male sex role, employed mothers are modeling traditionally masculine behaviors in taking employment.

The reviews of research on the children of employed women have suggested that the daughters show less traditional sex-role attitudes when compared to the daughters of nonemployed women (Etaugh, 1974; Hoffman, 1974). These reviews have suggested that daughters of employed women do not exclude traditionally feminine behaviors from their conception of femininity but incorporate traditionally masculine instrumental characteristics into their feminine role concept.

The research on maternal employment has suggested that the role of the father may also change if the mother is employed (Gold & Andres, 1978a, 1978b, 1978c). Greater paternal

involvement with children may be associated with maternal employment, with the result that the son observes traditionally feminine characteristics in his father (i.e., nurturance) (Vogel et al., 1970). These sons of employed mothers seem to incorporate traditionally feminine expressive characteristics into their conception of the masculine role without rejecting traditionally masculine behavior.

The research on maternal employment cited above leads to the expectation that daughters of employed mothers will differ from daughters of nonemployed mothers in being more masculine in their sex-role attitudes. Sons of employed women are expected to differ from other college-age men in being more feminine in their sex-role attitudes. It is expected that differences will be found within each sex when the children of employed and nonemployed women are compared.

The literature cited above has suggested that differences should exist when individuals exposed to nontraditional models in the home (employed mother) are compared to individuals experiencing traditional models during socialization (non-employed mother) on the sex-role attitudes. However, this difference may no longer exist when expressed attitudes are compared owing to the presence of nontraditional models in the college environment. The emphasis on changing traditional sex roles provided by the Women's Liberation Movement, in combination with the presentation of nontraditional models in the

college environment, may have caused today's traditionally raised college students to modify their consciously held beliefs. As a result, they may express attitudes which are as liberal as those found among the children of employed mothers. Nevertheless, it is expected that these differences will manifest themselves at the covert attitudes, which are not under conscious control, may be more resistive to change and, therefore, more representative of early socialization experiences.

These expectations have led to the formulation of the following hypotheses:

3. When covert sex-role attitudes are contrasted according to sex and two levels of maternal employment using the masculine oriented factors of the OCQ and Gough Fe, there will be a significant interaction between sex and maternal employment. It is expected that women with employed mothers will obtain higher scores when compared with women with nonemployed mothers.
4. When covert sex-role attitudes are contrasted according to sex and two levels of maternal employment using the feminine oriented factors of the OCQ and Gough Fe, there will be a significant interaction between sex and maternal employment. It is expected that men with employed mothers will obtain higher scores when compared with men with nonemployed mothers.

Since it has been argued that powerful models influence both attitudes and behaviours, it is proposed that a student's choice of field of study is, to some extent, dependent on the influence of powerful models. Above, a case has been made for the influence of parents. However, some available research suggests that, in this context, it is other powerful models that are most important. Research on role model influence on college

females(Almquist and Angrist, 1971) has suggested that the student identifies with her professor or a worker in a particular field and, in consequence, chooses that field.

It is proposed that such identification would influence not only choice of field but also underlying attitudes, in the case of students entering nontraditional fields. Should such a change not occur, the individual would experience dissonance. Therefore, it is expected that subjects enrolled in traditionally masculine fields will express covert masculine ~~sex-role~~ attitudes regardless of their sex, while the reverse will be true of subjects enrolled in traditionally feminine fields. Again, it is suggested that the past trend to expressed differences in sex-role attitudes found in individuals registered in non-traditional courses may have been reduced or eliminated by the forces of social change, while differences in covert attitudes remain.

These expectations have been formulated into the following hypotheses:

5. When covert sex-role attitudes of three occupational groups are contrasted using the masculine oriented factors of the OCQ and Gough Fe, subjects in the traditionally masculine occupation will obtain higher scores.
6. When covert sex-role attitudes of three occupational groups are contrasted using the feminine oriented factors of the OCQ and Gough Fe, subjects in the traditionally feminine occupation will obtain higher scores.

CHAPTER II

RESEARCH DESIGN

The first chapter of this study has reviewed the literature and presented the research hypotheses. It will be the purpose of this chapter to describe the subjects, measurement instruments, research procedure, and method of statistical analysis. The chapter will be divided into four sections which represent the four categories above.

Subjects

This study demanded adults with certain specific characteristics. It was considered desirable to restrict the sample to university students. The literature reviewed in Chapter I suggested that the problem examined in this study may be unique to university students. According to research, subjects with less education would not be as likely to express liberal sex-role attitudes (Medvene and Collins, 1974; Saarni, 1976; Whitehead and Tawes, 1976). As a result, the discrepancy between expressed and covert measures of sex-role attitudes in subjects observing traditional sex-role models early in life might not be found outside the university population.

The representation of a wide range of occupational groups was also considered desirable for this study. Since occupational choice was selected as a variable representing sex-typed behavior, it was considered necessary to study both men and women enrolled in traditionally masculine or feminine occupations as well as individuals enrolled in occupational

fields which have not been identified with either sex.

The subjects of this study were 129 students drawn from either first year undergraduate study or from the Teachers College which is affiliated with the University of Ottawa. Both males and females participated in the study. The majority of students was drawn from daytime classes which contain full-time students. Students were also drawn from two night classes containing part-time students. However, 52% of these students were under 25, the mean age being 24.8 years. Therefore, it seems unlikely that they differed greatly from the full-time undergraduate students.

Demographic data were collected for these students. Variables such as SES, age, culture, and University status have been found to be related to expressed sex-role attitudes (Lunneborg, 1974; Medvene and Collins, 1974; Whitehead and Tawes, 1976). Information was collected regarding these variables so that, if necessary, their effects could be statistically controlled. Tables I and 2 provide descriptive statistics on the variables of age, SES, and sex for the subjects participating in the study.

According to the Revised Socioeconomic Index for Occupations in Canada (Blishen and Roberts, 1976) used to determine the SES, 57% of the group fell in the top two categories of the scale. Hence, the subjects of this study appear to be primarily of a middle to upper middle class background.

Table I
Descriptive Statistics for Subjects on the Variable of Age

Mean	23.0
S.D.	4.9
Minimum	17
Maximum	43

Table 2
Percentages of Subjects Classified by Sex and Socioeconomic Status

Variable	%
Sex	
Male	44.1
Female	55.9
SES	
High (Categories 1&2)	57.3
Middle (Categories 3&4)	16.2
Low (Categories 5&6)	26.5

The average age of the subjects was 23 years. This is somewhat older than might be expected for first-year undergraduates. However, the necessity of obtaining a B.A. degree before entering teacher's college implies that an older age should be expected for approximately 1/3 of the sample.

Cultural differences were minimal in this group in that 87.6% of the students indicated an English Canadian background. The remainder consisted of French Canadians (3.9%), Europeans (5.6%) and other cultures (3.9%).

Since occupational choice for both sexes was chosen as a variable of interest to this study, the subjects were divided into three occupational groups. Students participating in this study were registered in either a traditionally masculine or traditionally feminine field, or in a variety of fields, some of which were sex stereotyped and some of which were associated with neither sex. Each group comprised approximately one-third of the sample. The traditionally masculine field was operationally defined as Business Management in this study. This particular option was chosen to represent a traditionally masculine field because the faculty contained sufficient numbers of males and females to permit research and also because it represents a professional field which has been dominated by men. The Faculty of Management Sciences reported that 29% of the students were women in 1976-77. The traditionally feminine field was operationally defined by registration in the elementary education level of Teachers College. Once again, the presence of sufficient numbers of students

of both sexes and a history of domination of the field by members of one sex were the reasons for selecting elementary school teachers to define the traditionally feminine field. The Faculty of Education reported that 78% of the students were women in 1976-77. The control group was registered in a variety of other fields, generally within the category of General Arts and Sciences. Appendix I shows the fields of study and numbers of students in these fields included in this group. A second table included in Appendix I shows the percentages of males and females enrolled in these Faculties during 1976-77. Observation of these tables indicates that the control group consisted of students registered in non-sex-typed fields of study (50%) and in a female sex-typed field of study (50% Nursing).

Measurement Instruments

The dependent variables in this study are expressed and covert sex-role attitudes. The measurement instruments are the Attitudes Towards Women Scale (AWS), The Gough Femininity Scale (Fe), and the Occupational Choice Questionnaire. (OCQ).

Attitudes Towards Women Scale (AWS)

The AWS (Spence and Helmreich, 1972) was chosen as a measure of expressed sex-role attitudes because the subjects taking this test are told explicitly that sex-role attitudes are being measured. The scale is presented to the subjects bearing the title "Attitudes Towards Women". The instructions

also make no attempt to conceal the purpose of the scale as they read: "The statements listed below describe attitudes towards the role of women in society which different people have. There are no right or wrong answers, only opinions." Similarly, the items are straightforward in their purpose. The following are typical examples of the items contained in the scale: "Women should take increasing responsibility for leadership in solving the intellectual and social problems of the day." "Women should not expect to go to exactly the same places or to have quite the same freedom of action as a man." "Under ordinary circumstances, men should be expected to pay all the expenses while they're out on a date." "Swearing and obscenity is more repulsive in the speech of a woman than a man." "Women have an obligation to be faithful to their husbands." "Divorced men should help support their children but should not be required to pay alimony if their wives are capable of working."

The AWS has gone through several preliminary versions. Initially, the items were drawn from the Kirkpatrick Belief-Pattern Scale for Measuring Attitudes Towards Feminism (Kirkpatrick, 1936), which is now somewhat outdated. The original items were chosen to describe roles and patterns of conduct in major areas of activity where egalitarianism is possible. Items for which egalitarianism is impossible (i.e., abortion) were not included. The early versions of the scale led to

elimination and rewriting of items. The form preceding that presently in use consisted of 78 items which were given to over 1,000 introductory psychology students in 1970-71. Factor and item analysis performed separately for each sex led to a final version of 55 items.

The AWS now contains items which were categorized by the authors into six content areas. These are: (1) vocational, educational, and intellectual roles; (2) freedom and independence; (3) dating, courtship, and etiquette; (4) drinking, swearing, and dirty jokes; (5) sexual behavior; and (6) marital relationships and obligations. This version of the test was given to two large samples of students of each sex (200+) drawn from introductory psychology courses in a Texas university during two consecutive semesters. Norms have been established for this sample.

The authors have demonstrated the validity of this scale as a reflection of attitudes towards women in several ways. As the Women's Liberation Movement has focused on the role of women in society, it seems reasonable to expect that women will express more liberal or nontraditional attitudes towards women's roles. Significant differences were found between the male and female students on the total scores, with women indicating a more liberal orientation. Significant differences were found between the men and women on 47 of the 55 items. Although women were more traditional on some items, in general they were more feminist.

Comparisons of students of both sexes and their parents provide another indication of validity. As the Women's Liberation Movement is a phenomenon of the 1960's, departures from traditional beliefs regarding sex roles might be expected to be more pronounced in young men and women than in their parents. Comparisons between total samples of parents and students and between subsamples of parents and their same-sex children suggested that the older group was significantly more conservative, with the difference between women and their daughters being most pronounced.

Since Spence and Helmreich's (1972) standardization of this instrument, Lunneborg (1974) has further demonstrated the validity of this scale. It has been found to differentiate between northern and southern U.S. college students and to change over time when change-inducing experiences have been provided (e.g., women's studies courses). Citizens of the southern United States are generally considered to be more conservative in social and political ideology. The results of the AWS in these samples supported this expectation. As women's studies courses tend to call traditional sex roles into question, it seems reasonable to expect that post-course scores would tend more towards the liberal orientation than pretest scores. The data supported this expectation.

Each item has four response alternatives, allowing the subject to quantify the extent of his or her agreement or

disagreement with the statement. The alternatives range from Agree Strongly to Disagree Strongly, giving scores from 0 to 3 with a score of 0 representing the most traditional orientation. The specific alternative given a score of 0 varied from item to item, as the statements varied from liberal to conservative in content. The total scores for both males and females are obtained by summing the values for individual items.

A factor analysis was conducted separately for each sex in the standardization sample. The authors obtained subscores by summing the values of those items which loaded significantly on the different factors (factor loadings of .40 or more).

Three subscores have been derived for males. The first appears to tap attitudes towards masculine superiority and the patriarchal family. Subscore two is concerned with equality of opportunity for women, with the primary emphasis being on the vocational and educational sphere. Secondary concern is given to women's participation in the affairs of society. Subscore three reflects attitudes towards social relationships between men and women, focusing on the conception of lady-like behavior.

Two subscores were derived for women. The first taps attitudes towards the "conventional" woman in her relationship to men. It appears that this subscore includes the same concerns tapped in subscores one and three for men. Subscore two

is similar to the male subscore with the exception that, in women, it includes items referring to the equal abilities of women.

The Gough Femininity Scale (Fe)

The present study required a measure of covert or less conscious sex-role attitudes; in effect, a measurement instrument which would conceal its purpose from the subjects being tested. The Fe scale (Gough, 1952) was chosen because the author, in devising this scale, had expressed several goals which were compatible with this study. The scale was intended by the author to be "brief, easy to administer, relatively subtle and unthreatening in content, and which will, at the same time differentiate men from women". (p. 427). In attempting to achieve this goal, the author selected only items which would not immediately be thought of as correlates of femininity. Thus, it appears to measure less conscious or covert sex-role attitudes. This test not only had the advantage of being a validated and widely used instrument, it was also possible to present it to the subjects as a personality inventory since an examination of the item content would not, at first glance, reveal the true purpose of the scale. The following are typical items: "I like mechanics magazines." "I would like the work of a librarian." "It is hard for me to 'bawl out' someone who is not doing his job properly." "I get very tense and anxious when

I think other people are disapproving of me". "I'm not the type to be a political leader." "I'm pretty sure I know how we can settle the international problems we face today."

Although the Gough Fe is a self-description on sex-stereotypic attributes there is some evidence to suggest a relationship between such self-descriptions and sex-role attitudes. Studies which have examined beliefs concerning sex stereotypes (Bem, 1974, Rosenkrantz et al. 1968, Spence, Helmreich and Stapp, 1974) have suggested that both sexes believe that the "typical" man and "typical" woman differ significantly on characteristics which can be categorized as instrumental or expressive. The man is seen as possessing instrumental characteristics while the woman is seen as possessing expressive characteristics. The data also indicates that when men and women are asked to describe themselves on these characteristics significant differences between the sexes are found in the same directions although the differences are not as pronounced. These studies suggest that an individual's self-description gives some indication of his or her beliefs concerning the characteristics typical of his or her sex.

Other studies (Spence, Helmreich and Stapp, 1975, Ellis and Bentler, 1973) have examined the relationship between beliefs concerning the characteristics differentiating men and women, self-descriptions on these traits and beliefs concerning the roles appropriate for men and women in society. These studies have suggested that a significant relationship exists between

beliefs concerning the attributes of "typical" men and women and beliefs concerning the roles appropriate for men and women in society. Those expressing the belief that men and women should assume different roles in society also believe that men and women differ in personality traits. The same relationship has been found to exist between self-descriptions and beliefs concerning the roles appropriate for men and women although the results are less extreme. A recent study reported by Spence and Helmreich (1978) using over 1400 students of both sexes in high school and college samples suggests that a cross-sex orientation is related to more liberal attitudes towards sex roles. In these samples self-description was significantly related to sex-role attitudes. Examination of the data for students classified as masculine, feminine, androgenous or undifferentiated on the Personal Attributes Questionnaire suggested that the results were produced mainly by the students who showed a cross-sex role orientation (i.e. men describing themselves as feminine or women describing themselves as masculine.) These studies suggest that an individual's self-description on sex-stereotypic items may also give some indication of his sex role ideology.

In summary, it may be said that the literature provides some justification for the use of the Gough Fe as a measure of covert sex role attitudes. Although it does not measure sex role attitudes directly, the literature suggests that it is possible to infer whether an individual's sex role attitudes are

liberal or conservative from the Gough Fe scale. In view of the evidence for validity which will now be presented, the Gough Fe appeared to be the most suitable measurement instrument available to measure covert sex role attitudes.

The scale was standardized and cross-validated on samples of males and females of high school and college age. Adequate split-half reliability coefficients are provided for the test, several indications of validity are reported, and the test was found to effectively differentiate between males and females. Further testing also indicated that the scale reliably differentiated between homosexuals and heterosexual men, with the homosexuals scoring in the feminine direction. A further indication of validity was obtained by having unbiased observers rate high and low scorers on an Adjective Checklist after interacting with the individuals. It was found that higher scorers tended to impress observers as having more "feminine" characteristics (i.e. as being accepting, soft, mild, tolerant, etc.).

Further studies with this test (Gough, 1966, 1968) have suggested that the Fe has cross-cultural validity in that it has been found to give a valid differentiation between males and females in other widely differing cultures. Not only has the scale as a whole stood up well with cross-cultural testing, but the individual items have generally proved to be valid discriminators in other cultures. A shortened version of 38 items, which correlates at the .95 level with the original form, was used for the present study.

The Gough Fe has also demonstrated its usefulness in discriminating between individuals who differ in the area of sex-typed behavior (occupational choice) of interest to this study. Several studies have suggested that individuals who are nontraditional in their occupational choice show less traditional sex-role attitudes on the Fe when compared to other members of their sex who have chosen more traditional occupations. McKenzie (1972) found that women who were housewives with B.A. degrees or elementary education majors obtained higher Gough Fe scores indicating more traditional sex-role attitudes when compared with women who were doctoral students in education or medical students. Similarly, average female high school students were found to obtain higher Fe scores than female high school students who were identified as potential scientists in a study by Davids (1966). Another study of men in a nontraditional profession (library science) by Clayton (1970) suggested that men in nontraditional professions can also be distinguished from traditional men as their Fe scores are higher than those of men in stereotype male professions.

The Gough Fe requires subjects to indicate whether the statement is true or false if applied to themselves. The questionnaire is devised so that True responses are indicative of femininity in some instances, while False responses suggest femininity on other items. A total score can be obtained by addition of items revealing a feminine orientation.

The items on the Fe were classified into several different categories by the author. They can be described briefly in the following manner: (1) acceptance of traditional female jobs and rejection of conventionally masculine jobs; (2) sensitivity and responsiveness to nuances and atmosphere of social situations; (3) feelings of social timidity and lack of confidence; (4) sense of compassion; (5) lack of interest in larger, political and social world; (6) need for order; (7) moderate irritability or pettiness in judgment; (8) conformity to authority; (9) quickness of emotional response; and (10) tendency to worry and sentimentality. It was decided that a factor analysis would be done with the 38-item version of the questionnaire employed to see if the items did in fact form factors. If factors appeared, they might be profitably used as additional dependent variables. Factor scores might differ between groups where the total score might not indicate significant differences. Principal component varimax rotation was employed to factor analyse the questionnaire. Seven orthogonal factors were derived from the factor analysis. The factors were labeled according to the nature of the items which loaded most heavily on these factors. Table 5 in Chapter III presents these factors and the major items contained in each factor. The seven factors were labeled as follows:

- 1 neurotic emotionality
- 2 enjoyment of jokes
- 3 questioning of authority
- 4 preference for aggressive activity
- 5 preference for traditionally feminine jobs
- 6 sense of superiority
- 7 preference for traditionally masculine jobs

These seven factors, plus the total scores were used as dependent variables in this study, representing covert sex-role attitudes.

Occupational Choice Questionnaire (OCQ)

A measurement instrument designed to measure covert sex-role attitudes which are related to vocational choice was developed for the purposes of this study. Although the Gough Fe is a measure of covert sex-role attitudes, the scale was not developed to examine attitudes which would be specifically related to occupational choice. At the time of this study, no instrument of this nature existed other than Horner's Ms projective. Tresemer (1976) has criticized the Ms as being an unreliable predictor of behavior. Therefore, a questionnaire was developed for this study.

The OCQ was developed from the work of Douvan and Adelson (1966), which was mentioned in Chapter I. They had conducted a large-scale interview study of adolescence which had led them to conclude that sex-role socialization produces

a different orientation towards work in males and females. In essence, their research suggested that men are taught to define themselves primarily through their work, while women are taught to define themselves through interpersonal relationships. These different methods of self-definition are reflected in the reasons given for choosing a particular vocation, goals for personal improvement, and qualities admired in adult models.

The results of the interview suggested that men were drawn to a particular vocation because they were attracted to the work itself. Interest in the activity also tended to be reflected in either acquaintance with workers in this occupational field or part-time jobs held in this field, or both. Women did not have much interest in the nature of the work itself; instead, they chose jobs because they would facilitate interpersonal relationships. Thus, jobs were chosen because they were conducive to meeting new people, either as co-workers or clientele. Numerous jobs can provide these opportunities, although the nature of the work varies greatly. It also appeared that women chose jobs that would not disrupt their presently existing interpersonal relationships. They were more concerned with being able to obtain jobs in their home towns so that they would not have to relocate away from family and friends. Easy access to jobs was also important to them as it would facilitate family relationships by permitting periods of unemployment.

Orientation towards self-improvement and valued traits in others also revealed sex differences in self-definition. Men tended to wish that they could improve characteristics which would facilitate success at work, whereas women tended to desire changes in themselves which would facilitate success in interpersonal relationships. Thus men tended to desire changes in character traits such as determination; women, on the other hand, wished to change their physical appearance or social skills (i.e., conversational skills). Similarly, men tended to admire those who were successful in work, whereas women tended to admire those who were interpersonally successful.

The questionnaire items were drawn from relevant sections of the Appendix to Douvan and Adelson's (1966) interview study. Both the masculine and feminine responses to three areas of inquiry were converted into questionnaire form. The three areas were: (1) reasons for choosing present occupational field; (2) qualities which would be improved in the self, if possible; and (3) qualities admired in other people. Each item was bipolar in nature and the subject was asked to indicate the importance of a particular item to him/herself by marking an appropriate part of the line which represented a continuum from very important to very unimportant. Scores from 1 to 7 were possible for each item.

The first section of the questionnaire elicited information needed for classification of the subjects on independent variables of the study and for demographic description of the sample. Information on the occupational choice of parents, degree of commitment to occupation on the part of parents (i.e., full-, part-time, or seasonal employment), length of parental employment, subject's age, nationality, year of study, and field of study was obtained.

The preliminary questionnaire was administered to 100 introductory psychology students and was factor analyzed using principal component varimax rotation. It was expected that factors which could be labeled as either masculine or feminine covert sex-role attitudes would be derived from a factor analysis since the responses typical of both males and females in the three areas of inquiry in Douvan and Adelson's (1966) research had been included in the questionnaire. Five factors, which are described in Appendix 2, were obtained from the factor analysis. The titles were obtained by scrutinizing the items which loaded most heavily on each factor. The factors were item analyzed and some items were dropped, leaving the final questionnaire. The results of the item analysis and split-half reliability are given in Appendix 2.

After the administration of the questionnaire to the research subjects, a second factor analysis was conducted. Nine factors were derived from the second analysis. Each factor

reflected either a masculine or feminine orientation towards work as the items loading most highly on the factor were predominantly those previously associated with either orientation in the original research of Douvan and Adelson (1966). Once again, the titles were obtained by observation of the items loading highly on the factors. The titles are listed here.

Table 5 in Chapter III presents the titles, items contributing most to the factor, and the sex-role orientation reflected in the factor. The factor titles are as follows:

- 1 social orientation
- 2 control and independence
- 3 importance of appearing successful
- 4 social self-improvement
- 5 physical self-improvement
- 6 social service orientation
- 7 moral character and determination
- 8 sound judgment
- 9 outdoor work

These nine factors were used in the study as dependent variables measuring covert sex-role attitudes which are directly related to occupational choice.

The questionnaire was readministered to 39 subjects eight to twelve weeks after they participated in the study in order to study the test-retest reliability of the questionnaire. Factor scores were obtained for the second administration of the questionnaire for each subject. The Pearson product moment correlation coefficient was used to determine the test-retest

reliability of each factor. The results are reported in Appendix 2.

Structured Interview

A structured interview was designed for use in the case studies. The questions were designed to elicit information about the subject's history which has previously been found to be related to sex-role attitudes and vocational choice but which is rather difficult to obtain through a questionnaire. The first section of the questionnaire focused on variables found in Douvan and Adelson's (1966) study to be relevant to vocational choice. The subjects were asked about other jobs considered and leisure and early vocational experiences which might have influenced occupational choice. The second section of the interview attempted to examine variables found by Baruch (1972) to influence sex-role ideology. These questions attempted to rate parental satisfaction with sex roles and sex-role ideology of the subject. The questions were designed so that the subject's awareness of the importance of sex-role attitudes was minimized. The questions used in the interview are given in Appendix 3.

Procedure

The preliminary version of the OCQ was administered during two introductory psychology lectures in September 1976.

The remainder of the data was collected in the fall semester of 1976 and the spring semester of 1977.

The subjects were recruited during introductory level classes in different disciplines. Letters were sent to the deans of undergraduate faculties and schools describing the study and asking permission to enter classes with the intention of recruiting volunteers for the research. As Management and Education students were particularly important to the study, students in every Introduction to Management course and all Elementary Education students were asked to participate in the study. The control group was drawn from classes in Nursing and Psychology (introductory level) in which the professors had agreed to allow entry into the classes.

The subjects were told that the study would involve approximately one to one-and-a-half hours of time outside class hours. Although course credit or financial remuneration was not possible, the students were promised a summary of results if they wished. They were told that the study was concerned with the influence of Women's Liberation on occupational choice. They were told that the examiner was interested in the reasons people chose a particular vocation now that Women's Liberation was encouraging people of both sexes to consider a wider range of jobs. They were told that they would be surveyed for their agreement with typical reasons for job choice, their personal interests, personality, and support of Women's Liberation.

They were guaranteed anonymity through the use of a coding system. After the request, sheets were circulated to obtain names and phone numbers of volunteers.

The subjects were tested in groups in vacant classrooms of the university at times which were convenient to them. The groups ranged in size from 5 to 25. The questionnaires were labeled A, B, and C. The OCQ, labeled questionnaire A, was administered first, followed by the Gough Fe and AWS, labeled questionnaires B and C, respectively. The subjects were told that they could work at their own pace and should ask for assistance if necessary. They were reminded to use the code number provided for all questionnaires. If they were interested in participating in a follow-up interview, they were requested to put their name and phone number on the answer sheet to the last questionnaire. A list was provided for those wishing to leave names and addresses so that they could later receive results from the study.

Subjects willing to participate in the case study interviews were contacted late in the spring semester. The subjects were selected to represent each cell in the research design. It was intended that eight subjects would be interviewed from each occupational group. Four males and four females would be interviewed in each occupational group. The sexes would then be subdivided into groups in which the mother had been employed or nonemployed when the subject was a child. If more than two

subjects had volunteered in these categories, numbers were drawn at random. Only four Education students were interviewed. There were few volunteers from this faculty, possibly because of the heavy academic and practice teaching load for these students. Fortunately, however, those volunteering fell into the four categories required for that faculty. Thus, subjects representing all possible combinations of the three independent variables of occupational group, sex, and maternal employment status were represented in the case studies.

Following the collection of the data, the tests were marked and scores obtained for the AWS and the Gough Fe total scores according to the methods described in the manuals. The OCQ was scored by item. Each item could produce a score ranging from 0 to 7. The Gough Fe was scored by item as well as by the total score method, so that the factor analysis could be performed. A true response was given a score of 1, while a false response was given a score of 2.

Statistical Analysis

This study had three independent variables: occupational group, maternal employment status, and sex. Expressed sex-role attitudes as measured by the AWS and covert sex-role attitudes as measured by the Gough Fe factor and total scores and the OCQ factor scores comprised the dependent variables of the study.

The subjects were classified for purposes of statistical analysis on the three independent variables. The information was obtained from the introductory section of the OCQ. The subjects were classified as to occupational group into the Education, Management, or General Arts and Science Group. They were classified as belonging to the maternal employment group if their mother had worked part-time beginning no later than during their elementary school years or if their mother had worked full-time beginning no later than during their high school years. They were also classified as to sex.

Preliminary analyses of the data were performed to determine whether the data were suitable for analysis of variance, whether multivariate statistics should be used, and whether covariates should be employed. Condescriptives were prepared for all dependent variables to test the distribution of data. All dependent variables were correlated to determine whether MANOVA was required to test hypotheses. One-way ANOVAS were performed on all dependent variables using SES and culture as independent variables. These ANOVAS were employed to determine whether SES and culture should be employed as covariates.

To test the hypotheses, analyses of variance with fixed effects were performed on the dependent variables of the study. Two-way analyses of variance with sex and maternal employment as independent variables were performed on the dependent variables using all subjects to test the hypotheses concerning the effects of sex and maternal employment. The hypotheses concerning

the relationships between occupational group and the dependent variables were tested using a one-way analysis of variance with occupational group as the independent variable which excluded the nursing students included in the General Arts and Science group. The elimination of the nursing students was employed as a means of ensuring that the occupational groups defined as traditionally masculine and feminine were being compared with a group which was truly non-sex stereotyped. The Scheffé method was used for post hoc procedures where necessary. Table 3 illustrates the statistical design of the study. Table 4 shows the distribution of students in different faculties of the General Arts and Science group on the variables of sex and maternal employment.

Minor Hypotheses

The preceding chapter has presented the hypotheses of major interest to this study. Minor hypotheses are presented here. Some of these hypotheses examine relationships which have been examined previously in the literature, but which may have been altered by social change. Previous research suggested that maternal employment is related to liberal expressed sex-role attitudes, particularly for women. The following two hypotheses examine these relationships. Although these relationships may have changed in recent years, the hypotheses are formulated according to the expectations that follow from the previous research.

Table 3

Classification of Subjects on the Independent Variables: Sex,
Maternal Employment Status, and Faculty

	Males		Females	
	Mother employed	Mother nonemployed	Mother employed	Mother nonemployed
	<u>n</u>	<u>n</u>	<u>n</u>	<u>n</u>
Education	6	17	6	11
Management	6	13	7	13
General Arts & Sciences	7	8	10	25

Table 4

Distribution of Students in Faculties Included
in the General Arts and Sciences Sample on
the Variables of Sex and Maternal
Employment Status

Faculty	Male		Female	
	Mother Employed	Mother Non-employed	Mother Employed	Mother Non-Employed
Social Sc.	1	3	0	1
Arts	2	1	1	4
Phys. Ed.	1	2	0	0
Natural Sc. (All Biol.)	3	2	2	2
Nursing	0	0	7	18

- I. There will be significant differences on the average AWS scores representing expressed sex-role attitudes when children of employed mothers are compared with children of nonemployed mothers, with the children of employed mothers obtaining the higher mean score.
2. When average AWS scores for expressed sex-role attitudes are contrasted according to two levels of maternal employment and sex, there will be a significant interaction between maternal employment and sex, with daughters of employed mothers obtaining higher mean scores when compared with daughters of nonemployed mothers.

Although recent research with college populations has suggested that sex-role attitudes are becoming more liberal in this population, men have been found to be more conservative than women. The following hypothesis examines the expressed sex-role attitudes of men and women with the expectation that women will obtain more liberal scores when compared with men.

3. There will be significant differences on the average AWS scores representing expressed sex-role attitudes when men and women are compared, with women obtaining the higher mean scores.

The remaining hypothesis has received little attention in the literature. As the design permits these contrasts, they are examined but no prediction is made as to the direction of differences between groups.

4. There will be significant differences on the average AWS scores representing expressed sex-role attitudes when three occupational groups are compared.

CHAPTER III

PRESENTATION OF RESULTS

This chapter will present the results of the testing of the null hypotheses presented in Chapter I. The chapter is divided into three sections. The first section presents the rationale and results of the preliminary analyses of the data which preceded the testing of the hypotheses. The second section of the chapter presents the results of the testing of the research hypotheses. The third section presents the results of the structured interviews which were conducted with a subsample of the research subjects.

Preliminary Analyses of the Data

The preliminary analyses were performed to answer three specific questions. The appropriateness of analysis of variance as the technique for testing hypotheses, and the necessity of using multivariate or univariate analyses needed to be established. In addition, the relationship between the dependent variables and certain demographic characteristics needed to be examined.

It was intended that the hypotheses of this study be tested using analysis of variance with fixed effects. Before proceeding with the analysis, the dependent variables were examined to see if the assumptions of analysis of variance

were met. Each dependent variable was examined for its mean, standard deviation, variance, range, skew, and kurtosis. The results for all dependent variables are presented in Appendix 4. As standard scores were employed for the factor scores of the Occupational Choice Questionnaire and the Gough Femininity Scale, all means are zero and all SD are one, so these are not reported. Although one variable deviated somewhat from normal distribution, all other dependent variables seemed to be normally distributed so that the use of analysis of variance to test the research hypotheses seemed justifiable.

In order to determine whether univariate or multivariate statistics should be used, it was necessary to establish whether the dependent variables were significantly related. Pearson product moment correlation coefficients were computed between all dependent variables of the study. The important correlations are presented in Appendix 5. Although some correlations proved to be statistically significant, they were not high enough to support the use of multivariate techniques.

The literature reviewed in Chapter I suggested that certain demographic variables such as age and socioeconomic status may be related to sex-role attitudes. It seems reasonable to assume that culture might also be related to sex-role attitudes. As the sample of college students studied are drawn from a university located in the national capital, it seemed likely that foreign students would be included in the

sample. Before proceeding with the testing of hypotheses, two types of preliminary analyses were performed to determine if relationships existed between these subject variables and the dependent variables of the study. If significant relationships existed according to the results of the preliminary analyses, the variables of socioeconomic status, age, or culture could be controlled through the use of analysis of covariance.

One-way analyses of variance were performed on all dependent variables to test for the effects of three levels of SES or four cultural groups. The high, middle, and low levels of SES were created by grouping the six categories of the Blishen Scale into three groups, each of which contained two categories. The subjects were classified into the following four cultural groups: (1) English Canadian, American, or British, (2) French Canadian, (3) European, (4) other. The results of these analyses of variance are presented in Appendix 6. The results suggested that no significant differences on mean scores for the dependent variables exist among groups classified in the manner described on the variable of SES and nationality. These results suggested that it would not be necessary to control for the effects of these variables in testing the hypotheses.

The relationship between age and the dependent variables was determined by computing Pearson product moment correlation coefficients between age and all dependent variables. The

results are included in Appendix 5 which has been previously mentioned. Only two correlations proved statistically significant (.18 and .20). However, these correlations were not considered to be of sufficient magnitude to warrant the control of age in the testing of hypotheses.

In summary, the preliminary analyses of the data suggested that analysis of variance could be used to test the research hypotheses. Multivariate techniques did not appear to be necessary. The results of the preliminary analyses also suggested that variables such as SES, age, and culture were not significantly related to the dependent variables and so their influence did not need to be statistically controlled in testing the hypotheses.

The following section of this chapter presents the results of the testing of hypothesis presented in Chapter I.

The Results of Testing the Research Hypotheses

This section will begin by presenting the analyses of variance used to test the research hypotheses. A general summary of the results will be presented. Following the general summary, each hypothesis will be restated and the results and post hoc analyses of the analyses of variance particular to that hypothesis will be presented.

The major hypotheses of this thesis, which concern themselves with covert sex-role attitudes were tested using a two-way univariate analysis of variance with fixed effects and

a one-way univariate analysis of variance on each factor score of the OCQ and Gough Fe and on the total score for the Gough Fe. The independent variables in the two-way analyses were maternal employment status (employed versus nonemployed) and sex. The independent variable in the one-way analysis was faculty (Education, Management, and General Arts and Sciences.) As has been mentioned previously, all subjects were included in the two-way analyses while the Nursing students were dropped from the analyses comparing students registered in the three faculties as a means of ensuring that the students in the General Arts and Science group were truly representative of students in non-sex stereotyped fields of study.

Table 5 summarizes the results of the two-way analyses of variance performed on the nine factors of the OCQ. Main effects were found on the analyses for factors 5 ($F = 4.11, p < .05$) and 8 ($F = 5.62, p < .05$) on the independent variable of sex. A significant interaction between sex and maternal employment occurred to influence mean scores on OCQ factor I ($F = 5.29, p < .05$)

Table 6 summarizes the results of the one-way analysis of variance performed on the nine factors of the OCQ. Main effects were found on the analyses for factors 4 ($F = 6.36, p < .01$) 6 ($F = 6.99, p < .001$) , 7 ($F = 6.48, p < .01$) , 8 ($F = 4.28, p < .05$) and 9 ($F = 4.96, p < .01$) on the independent variable of faculty.

Table 7 summarizes the results of the two-way analyses of variance performed on the Gough Fe factor and total scores.

Table 5

Summary of Results of Analyses of Variance for Groups Classified
by Maternal Employment and Sex on OCQ Factor

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Factor 1				
Main Effects				
Maternal Employment (A)	1	2.04	2.41	n.s.
Sex (B)	1	1.48	1.74	n.s.
Interaction				
A X B	1	4.48	5.29	*
Error	125	.85		
Total	128			
Factor 2				
Main Effects				
Maternal Employment (A)	1	1.58	1.63	n.s.
Sex (B)	1	3.76	3.88	n.s.
Interaction				
A X B	1	1.3	1.34	n.s.
Error	125	.97		
Total	128			
Factor 3				
Main Effects				
Maternal Employment (A)	1	.16	.16	n.s.
Sex (B)	1	.25	.25	n.s.
Interaction				
A X B	1	1.46	1.46	n.s.
Error	125	1.00		
Total	128			
Factor 4				
Main Effects				
Maternal Employment (A)	1	.81	.83	n.s.
Sex (B)	1	2.93	3.01	n.s.
Interaction				
A X B	1	.21	.21	n.s.
Error	125	.98		
Total	128			

Table 5 (Cont'd.)

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Factor 5				
Main Effects				
Maternal Employment (A)	1	.39	.40	n.s.
Sex (B)	1	3.94	4.11	*
Interaction				
A X B	1	1.56	1.63	n.s.
Error	125	.96		
Total	128			
Factor 6				
Main Effects				
Maternal Employment (A)	1	1.32	1.32	n.s.
Sex (B)	1	.84	.83	n.s.
Interaction				
A X B	1	.14	.14	n.s.
Error	125	1.003		
Total	128			
Factor 7				
Main Effects				
Maternal Employment (A)	1	2.73	2.76	n.s.
Sex (B)	1	.15	.15	n.s.
Interaction				
A X B	1	1.61	1.63	n.s.
Error	125	.99		
Total	128			
Factor 8				
Main Effects				
Maternal Employment (A)	1	1.38	1.45	n.s.
Sex (B)	1	5.34	5.62	*
Interaction				
A X B	1	2.18	2.29	n.s.
Error	125	.95		
Total	128			
Factor 9				
Main Effects				
Maternal Employment (A)	1	.2	.2	n.s.
Sex (B)	1	.05	.05	n.s.
Interaction				
A X B	1	.13	.13	n.s.
Error	125	.79		
Total	128			

* p < .05

Table 6

Summary of Results of Analyses of Variance for Groups Classified
by Occupational Group on OCQ Factors

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Factor 1				
Main Effects	2	1.94	2.05	n.s.
Error	101	.95		
Total	103			
Factor 2				
Main Effects	2	.46	.50	n.s.
Error	101	.92		
Total	103			
Factor 3				
Main Effects	2	2.39	2.42	n.s.
Error	101	.99		
Total	103			
Factor 4				
Main Effects	2	5.09	6.36	**
Error	101	.80		
Total	103			
Factor 5				
Main Effects	2	.40	.46	n.s.
Error	101	.86		
Total	103			
Factor 6				
Main Effects	2	6.59	6.99	***
Error	101	.94		
Total	103			
Factor 7				
Main Effects	2	5.68	6.48	**
Error	101	.88		
Total	103			
Factor 8				
Main Effects	2	4.16	4.28	*
Error	101	.97		
Total	103			

Table 6 ((Cont'd.))

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Factor 9				
Main Effects	2	3.69	4.96	**
Error	101	.74		
Total	103			

* $p < .05$
 ** $p < .01$
 *** $p < .001$

Table 7

Summary of Results of Analyses of Variance for Groups Classified
by Maternal Employment and Sex on Gough Fe Factor and Total
Scores

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Factor 1				
Main Effects				
Maternal Employment (A)	1	.85	.95	n.s.
Sex (B)	1	13.88	14.96	***
Interaction				
A X B	1	1.84	2.05	n.s.
Error	125	.90		
Total	128			
Factor 2				
Main Effects				
Maternal Employment (A)	1	.39	.38	n.s.
Sex (B)	1	.04	.04	n.s.
Interaction				
A X B	1	1.39	1.37	n.s.
Error	125	1.02		
Total	128			
Factor 3				
Main Effects				
Maternal Employment (A)	1	.08	.08	n.s.
Sex (B)	1	.79	.73	n.s.
Interaction				
A X B	1	1.74	1.74	n.s.
Error	125	1.00		
Total	128			
Factor 4				
Main Effects				
Maternal Employment (A)	1	.02	.02	n.s.
Sex (B)	1	13.35	14.76	***
Interaction				
A X B	1	1.3	1.43	n.s.
Error	125	.90		
Total	128			

Table 7 (Cont'd.)

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Factor 5				
Main Effects				
Maternal Employment (A)	1	.27	.35	n.s.
Sex (B)	1	23.75	30.42	***
Interaction				
A X B	1	.05	.06	n.s.
Error	125	.78		
Total	128			
Factor 6				
Main Effects				
Maternal Employment (A)	1	.54	.55	n.s.
Sex (B)	1	3.35	3.42	n.s.
Interaction				
A X B	1	2.21	2.26	n.s.
Error	125	.98		
Total	128			
Factor 7				
Main Effects				
Maternal Employment (A)	1	.45	.45	n.s.
Sex (B)	1	.003	.003	n.s.
Interaction				
A X B	1	.34	.34	n.s.
Error	125	1.01		
Total	128			
Gough Total				
Main Effects				
Maternal Employment (A)	1	.01	.00	n.s.
Sex (B)	1	831.66	69.05	***
Interaction				
A X B	1	.18	.01	n.s.
Error	125	12.05		
Total	128			

* $p < .05$ ** $p < .01$ *** $p < .001$

Significant differences between sexes were found on mean scores for factor I ($F=14.95$ $p<.001$), 4 ($F= 14.76$ $p<.001$) and 5 ($F=30.42$ $p<.001$) and for the Gough Fe total score ($F=69.05$ $p<.001$). No other main or interaction effects were found.

Table 8 summarizes the results of the one-way analyses of variance performed on the Gough Fe factor and total scores. A significant difference on mean scores was found among faculties on Gough Fe factor 7 ($F= 3.88$ $p<.05$).

The minor hypotheses, which concern themselves principally with expressed sex-role attitudes were also tested using two and one-way univariate analyses of variance with fixed effects for the total scores of the AWS (see tables 9 and 10). The independent variables were the same as those used for the analyses of covert sex-role attitudes. The two-way analyses used the independent variables of maternal employment status and sex while the one-way analyses used the independent variable of faculty. (Education, Management, General Arts and Science). The results presented in tables 9 and 10 indicate that main effects were found for maternal employment ($F= 3.75$ $p<.05$) and sex ($F= 19.03$ $p<.001$). No main effects for faculty or interaction effects for maternal employment and sex were found.

In summary, it may be said that the results of the analyses of variance conducted on the factor and total scores of the OCQ, Gough Fe and AWS suggest that significant differences existed between groups classified on the independent variables of

Table 8

Summary of Results of Analyses of Variance for Groups Classified by Occupational Group or Gough Fe Factor and Total Scores

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Factor 1				
Main Effects	2	1.22	1.14	n.s.
Error	101	1.08		
Total	103			
Factor 2				
Main Effects	2	.95	.92	n.s.
Error	101	1.03		
Total	103			
Factor 3				
Main Effects	2	1.0	.94	n.s.
Error	101	1.06		
Total	103			
Factor 4				
Main Effects	2	.70	.70	n.s.
Error	101	1.01		
Total	103			
Factor 5				
Main Effects	2	.62	1.0	n.s.
Error	101	.62		
Total	103			
Factor 6				
Main Effects	2	.66	.79	n.s.
Error	101	.84		
Total	103			
Factor 7				
Main Effects	2	3.85	3.88	*
Error	101	.99		
Total	103			
FE Total				
Main Effects	2	12.38	.69	n.s.
Error	101	18.03		
Total	103			

* $p < .05$

Table 9

Summary of Results of Analyses of Variance for Groups Classified
by Maternal Employment and Sex on AWS Total Score

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Main Effects				
Maternal Employment (A)	1	1,459.13	3.75	*
Sex (B)	1	7,555.67	19.03	***
Interaction				
A X B	1	172.43	.43	n.s.
Error	125	397.07		
Total	128			

* $p < .05$

*** $p < .001$

Table 10

Summary of Results of Analyses of Variance for Groups Classified
by Occupational Group on AWS Total Score

Source of Variance	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Main Effects	2	1,204.93	2.31	n.s.
Error	101	521.16		
Total	103			

faculty, maternal employment status and sex on some covert and expressed sex-role attitudes. These results will now be examined more closely as to their support for the specific hypotheses stated at the conclusion of Chapter I.

Major Hypotheses

- I. When covert sex-role attitudes of men and women are contrasted using the masculine oriented factors of the OCQ and Gough Fe, men will obtain the higher score.

Examination of the results of the two-way analyses of variance performed on the nine factors of the OCQ (see table 5) indicates that a significant difference on mean scores obtained by males and females exists on one of the factor scores which has been defined as masculine oriented. (Factor 8 $F = 5.62$ $p < .05$) For purposes of clarity, table II provides definitions of the nine OCQ factors and seven Gough Fe factors and indicates the interpretation regarding masculinity or femininity given to a low score. Examination of the mean scores for males and females (see table I2) indicates that the females received a lower score, suggesting that females place greater value on sound judgement when compared to males. These results do not support the hypothesis as the difference is not in the direction predicted.

The results of the two-way analyses of variance performed on the Gough Fe factor and total scores (see table 7) indicate that males and females differ significantly on mean scores obtained on factor 4 ($F = 14.76$ $p < .001$) . The results presented in table I3 which shows the mean scores obtained by males and females.

Table 11

Factor Titles, Item Content, and Sex-role Orientation for Gough Fe Factors and OCQ Factors

Gough Fe Factors	Items loading .40+or-	Sex-role orientation of low score (true responses)
1. Neurotic emotionality	- If I get too much change in a store I always give it back. + I am very slow making up my mind. + I am inclined to take things hard. + Sometimes I have the same dream over and over. + Sometimes I feel that I am about to go to pieces. + I get excited very easily. + I think I would like the work of a dress designer. + I get very tense and anxious when I think other people are disapproving of me.	feminine
2. Enjoyment of jokes	+ I like to go to parties and other affairs where there is lots of loud fun. + I like to be with a crowd who play jokes on one another. + I must admit that I enjoy playing practical jokes on people.	masculine
3. Questioning of authority	+ I am pretty sure I know how we can settle international problems we face today. - It's hard for me to start a conversation with strangers. + In school I was often sent to the principal for cutting up.	masculine

Table 11 (cont'd.)

Gough Fe Factors	Items loading .40+or-	Sex-role orientation of low score (true responses)
3.	+ I think I would like to drive a racing car. + I like mechanics magazines.	
4. Preference for aggressive activity	- I am somewhat afraid of the dark. + At times I feel like picking a fist fight with someone.	masculine
5. Preference for tradi- tionally feminine jobs	+ I would like to be a nurse + I always tried to make the best school grades that I could. - I like adventure stories better than romantic stories. + I think I would like the work of a clerk in a large department store.	feminine
6. Sense of superiority	+ I want to be an important person in the community. + I think I am stricter about right and wrong than most people. + The average person is not able to appreciate art and music very well. + I prefer a shower to a bath. + I become quite irritated when I see someone spit on the sidewalk.	masculine
7. Preference for tradi- tionally masculine jobs	+ If I were a reporter I would like very much to report news of the theatre.	masculine

Table 11 (cont'd.)

Gough Fe Factors.	Items loading .40+or-	Sex-role orientation of low score (true responses)
7.	+ I think I would like the work of a building contractor. + I think I would like the work of a garage mechanic.	masculine
OCQ Factors	Items loading .40+or-	Sex-role orienta- tion of low score (very important responses)
1. Social orientation	+ Interest in work + Opportunity to meet people + Generosity and kindness + Empathy and understanding	feminine
2. Control & in- dependence	+ Independence, being one's own boss + Opportunity to travel + Opportunity to be a leader of people	masculine
3. Importance of appearing successful	+ Opportunity to be admired by others + Success in their family life + Popular and attractive personality + Good looks and appearance	feminine
4. Social self- improvement	+ Assuming more independence and responsibility + Making friends more easily	feminine
5. Physical self- improvement	+ Bettering your moods and disposition	feminine

Table 11(Cont'd.)

OOQ Factors	Items loading .40+or-	Sex-role orientation of low score (very important responses)
5.	+ Improving your physical appearance + Improving your general health	
6. Social service orientation	+ Social service + Opportunity to work with children	feminine
7. Moral character & determination	- Improving your physical appearance + Strong moral character + Determination and drive	masculine
8. Sound judgment	+ Sound judgment	masculine
9. Outdoor work	+ Outdoor work	masculine

Table 12

Mean Scores and Standard Deviations for Groups Classified by Sex of OCQ Factor Scores Showing Statistically Significant Sex Differences

		Mean	Standard Deviation
Factor 5	Male ^a	.20	.96
	Female ^b	-.16	.99
Factor 8	Male	.23	1.12
	Female	-.18	.86

^aMale $\bar{n}$ = 57
 Female $\bar{n}$ = 72

Table 13

Mean Scores and Standard Deviations for Groups Classified by Sex or Gough Fe Factor and Total Scores Showing Statistically Significant Sex Differences

	Mean	Standard Deviation
Factor 1		
Male ^a	.36	.90
Female ^b	-.29	.99
Factor 4		
Male	-.36	.92
Female	.29	.97
Factor 5		
Male	.48	.58
Female	-.38	1.05
Total		
Male	17.79	3.70
Female	22.90	3.23

^a male $\bar{n}$ = 57
 female $\bar{n}$ = 72

on this factor indicate that males obtained the lower scores. These results suggest that males are more inclined to describe themselves as preferring aggressive, masculine activity when compared to females.

In summary, it may be said that the results of the analyses of OCQ masculine factors do not provide any evidence that men in this study hold more masculine covert sex-role attitudes when compared to women. However, some support for the hypothesis was found in the analysis of the Gough Fe masculine factors.

2. When covert sex-role attitudes of men and women are contrasted using the feminine oriented factors of the OCQ and Gough Fe, women will obtain higher scores.

The results of the two-way analyses of variance by sex and maternal employment performed on the OCQ factors (see table 5) indicate that a significant difference on mean factor scores obtained by men and women appeared on factor 5 ($F=4.11$ $p<.05$). The results presented in table I2, which shows the mean scores obtained by males and females on this factor indicate that females obtained the lower score. These results suggest that females are more inclined to express a desire for physical self-improvement.

The results of the two-way analyses of variance performed on the Gough Fe total and factor scores (see table 7) indicate that significant differences on mean scores occurred between males and females on several of the feminine factors of the Gough Fe. The results for each of these analyses will be

presented in turn.

The results for the total Gough Fe scores ($F=69.05$ $p < .001$) indicate the existence of a significant difference between males and females on the mean total scores obtained, suggesting that males and females differ significantly in their general covert sex-role attitudes. Examination of table 13, which shows the mean scores for males and females obtained on the Gough Fe total scores indicates that females obtained the higher mean score. These results suggest that females have more feminine covert sex-role attitudes when compared to males.

The results for the analysis of variance for Gough Fe factor 1 ($F=14.95$ $p < .001$) indicate that males and females differ significantly on the mean scores obtained on this factor. Table 13, which shows the mean scores obtained by males and females on this factor indicates that females obtained the lower mean score. These results suggest that females are more inclined to describe themselves as prone to neurotic emotionality.

The results for the analysis of variance for Gough Fe factor 5 ($F=30.42$ $p < .001$) indicate that males and females differ significantly on mean factor scores obtained for this factor. Examination of table 13 which shows the mean scores obtained by males and females on this factor indicates that females obtained the lower scores. These results suggest that females describe themselves as having greater preference for traditionally feminine jobs.

The results of the analyses of the OCQ factors provide some support for the hypothesis that females will show more feminine covert sex-role attitudes when compared to males. The Gough Fe total scores and two of the feminine factor scores also provide some evidence in support of the hypothesis.

3. When covert sex-role attitudes are contrasted according to sex and two levels of maternal employment using the masculine oriented factors of the OCQ and Gough Fe, there will be a significant interaction between sex and maternal employment. It is expected that women with employed mothers will obtain higher scores when compared with women with nonemployed mothers.

The results of the two-way analyses of variance performed on the factors of the OCQ (see table 5) do not indicate the presence of a significant interaction of sex and maternal employment on any of the masculine factors. Similarly, the results of the two-way analyses of variance for the Gough Fe total and factor scores (see table 7) do not indicate the presence of any interaction of sex and maternal employment influencing mean scores on masculine factors. These results suggest that the sex and maternal employment status of subjects in this study do not interact to influence scores on covert masculine factors. No support was found in this study for the expectation that daughters of employed mothers would express less traditional covert sex-role attitudes. These results led to the failure to reject the null hypothesis.

4. When covert sex-role attitudes are contrasted according to sex and two levels of maternal employment using the feminine oriented factors of the OCQ and Gough Fe there will be a significant interaction between sex and maternal employment. It is expected that men with

employed mothers will obtain higher scores when compared with men with nonemployed mothers

The results of the two-way analyses of variance performed on the factors of the OCQ(see table 5) indicate that a significant interaction between sex and maternal employment status occurred on factor I ($F= 5.29$ $p < .05$) Table I4 shows the mean scores for groups classified on the variables of sex and maternal employment. Figure I Illustrates the interaction suggesting that females generally place high value on a covert social orientation towards work while males differ according to maternal employment status. The sons of employed mothers appear to place less value on a covert social orientation when compared to males with nonemployed mothers. These results, although statistically significant, are not in the direction predicted and therefore do not support the hypothesis that men with employed mothers will obtain higher scores on feminine oriented factors.

The results of the two-way analyses of variance performed on the Gough Fe factor and total scores (see table 7) do not indicate the presence of any interaction between sex and maternal employment status influencing the mean scores on the feminine factors. These results suggest that sex and maternal employment do not interact in this study to influence scores on covert feminine factors. No support was found in this study for the expectation that sons of employed mothers would express less traditional covert sex -role attitudes. These results led to the failure to reject the null hypothesis.

Table 14

Mean Scores and Standard Deviations of Groups Classified by
Maternal Employment and Sex on OCQ Factor I

Group	<u>n</u>	<u>M</u>	<u>SD</u>
Employed Mothers			
Males	19	.60	1.68
Females	23	-.16	.86
Nonemployed Mothers			
Males	38	-.10	.70
Females	49	-.07	.69

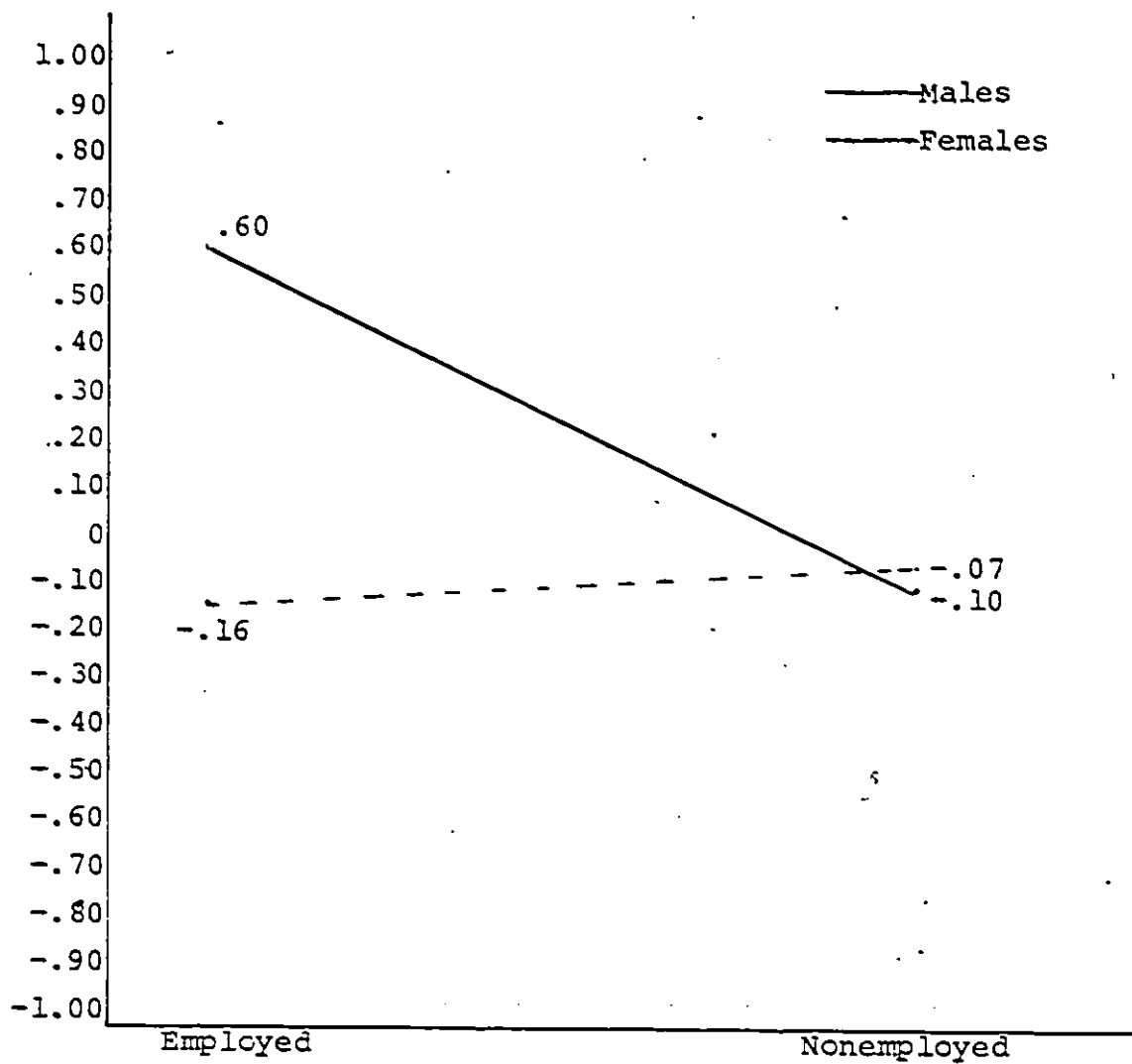


Figure 1 : Mean Scores on OCQ Factor 1 for Males and Females with Employed and Nonemployed Mothers.

5. When covert sex-role attitudes of three occupational groups are contrasted using the masculine oriented factors of the OCQ and Gough Fe, subjects in the traditionally masculine occupation will obtain higher scores.

The results of the one-way analyses of variance performed on the OCQ factor scores (see table 6) indicate that significant differences exist among the students in the three occupational groups on three of the masculine factors of the OCQ. The results for each factor will be present in turn.

The results of the analysis of variance on OCQ factor 7 scores indicate that a significant difference exists among the students in three occupational groups ($F=6.48$ $p<.01$). Examination of table 15 which shows the mean scores for the three faculties indicates that the Management students obtained the lowest mean score on this factor. Post hoc procedures using the Scheffé method indicate that significant differences exist when Education and Management groups are compared ($S=.50$ $D=.63$ $p<.05$) or when General Arts and Science and Management groups are compared ($S=.62$ $D=.74$ $p<.05$). These results suggest that Management students place significantly more value on strong moral character and determination when compared to either General Arts and Science students or Education students.

The results of the analysis of variance of OCQ factor 8 scores indicates that a significant difference exists among the students in three occupational groups ($F= 4.28$ $p<.05$). Observation of table 15 which shows the means for each group

Table 15
Mean Scores and Standard Deviations for Groups Classified
by Faculty on OCQ Factor Scores Showing Statistically
Significant Differences

		Mean	Standard Deviation
Factor 4	Education ^a	.36	1.03
	Management ^b	-.36	.77
	General Arts & Sc. ^c	-.01	.84
Factor 6	Education	-.34	.96
	Management	.45	1.04
	General Arts & Sc.	-.16	.87
Factor 7	Education	.21	.97
	Management	-.42	.85
	General Arts & Sc.	.32	1.01
Factor 8	Education	.27	.98
	Management	-.36	1.01
	General Arts & Sc.	.12	.96
Factor 9	Education	-.33	.80
	Management	.26	.96
	General Arts & Sc.	.11	.79

a Education $\underline{n} = 40$

b Management $\underline{n} = 39$

c General Arts & Sc. $\underline{n} = 25$

indicates that a significant difference exists when the Management and Education groups are compared ($S=.55$ $d=.63$ $p<.05$). These results suggest that Management students place significantly more value on sound judgement as defined by factor 8 than do Education students. No significant differences were found with the other comparisons.

The results of the analysis of variance of OCQ factor 9 scores indicate that a significant difference exists among the students in three occupational groups ($F=4.96$ $p<.01$).

Examination of table 15 which shows the means for each group indicates that Education students obtained the lowest mean score on this factor. Comparisons between the groups using the Scheffe method indicates that a significant difference exists when the Education and Management groups are compared ($S=.50$ $D=.59$ $p<.05$). These results suggest that Education students place significantly more value on the possibility of outdoor work than do Management students. No significant differences were found with other comparisons.

The results of the one-way analyses of variance performed on the Gough Fe total and factor scores (see table 8) indicate the presence of a significant difference among students of the three occupational groups on mean scores for factor 7 ($F=3.88$ $p<.05$). Examination of table 16 which presents the mean scores for the groups indicates that General Arts and Science students obtained the lowest mean scores for factor 7. Comparisons between groups using the Scheffe method *

Table 16

Mean Scores and Standard Deviations for Groups Classified by Faculty on Gough Fe Factor Score 7 Showing Statistically Significant Differences

	Mean	Standard Deviation
Education ^a	-.17	1.24
Management ^b	.35	.77
General Arts and Science ^c	-.27	.86

a Education n = 40
 Management n = 39
 General Arts and Science n = 25

indicate that a significant difference on mean scores for factor 7 exists between Management and General Arts and Science students ($S=.61$ $D=.62$ $p<.05$). These results suggest that Education students express significantly more interest in traditionally masculine jobs when compared to Management students. No other comparisons proved significant.

The results of the analyses of the OCQ factors provide some support for the hypothesis that subjects in masculine fields will obtain higher scores on covert masculine factors. While a difference between occupational groups was found on a masculine factor of the Gough Fe, this difference was not in the direction predicted and therefore did not provide support for the hypothesis.

6. When covert sex-role attitudes of three occupational groups are contrasted using the feminine oriented factors of the OCQ and Gough Fe, subjects in the traditionally feminine occupation will obtain higher scores.

The results of the one-way analysis of variance performed on the OCQ factor scores indicate that significant difference exist among occupational groups on two of the feminine factors (see table 6). The results for each will be presented in turn.

The analysis of variance of OCQ factor 4 indicates that a significant difference exists among the students in the three occupational groups ($F=6.36$ $p<.01$). Examination of table 15 which presents the mean scores for each group,

indicates that the Management group obtained the lowest mean score on this factor. Post hoc testing, using the Scheffe' method indicates that a significant difference exists when Management students are compared with Education students. ($S=.50$ $D=.72$ $p < .05$). No other comparisons proved significant. These results suggest that Management students place significantly more value on social self-improvement.

The analysis of variance for OCQ factor 6 indicates that a significant difference exists among the students in the three occupational groups ($F=6.99$ $p < .001$). Examination of table 15 which presents the mean scores for each group, indicates that the Management group obtained the lowest mean score on this factor. Post hoc testing, using the Scheffe' method indicates that a significant difference exist when Management students are compared with Education students ($S=.55$ $D=.79$ $p < .05$) or with General Arts and Science students ($S=.59$ $D=.61$ $p < .05$). These results suggest that Management students place significantly more value on the social service orientation to work when compared to Management students.

The results of the one-way analyses of variance performed on the Gough Fe total and Factor scores (see table 8) do not indicate the presence of significant differences among occupational groups on the feminine factors. The Gough Fe factors provide no support in this study for the existence of significant differences on covert feminine factors among

occupational groups. However, the OCQ does provide some support for the expectation that traditionally feminine occupational groups will obtain higher scores on covert feminine variables.

Minor Hypotheses

1. There will be significant differences on the average AWS scores representing expressed sex-role attitudes when children of employed mothers are compared with children of nonemployed mothers with the children of employed mothers obtaining the higher mean score.

The results of the two-way analysis of variance performed on the AWS scores (see table 9) indicate that there is a significant difference between the mean scores obtained by the children of employed and nonemployed mothers ($F=3.75$ $p < .05$). Comparison of the mean scores obtained by the children of employed and nonemployed mothers (see table 17) indicates that the children of working mothers obtained the higher mean scores. These results suggest that the children of employed mothers express less traditional sex-role attitudes. On the basis of these results, the null hypothesis was rejected.

2. When average AWS scores for expressed sex-role attitudes are contrasted according to two levels of maternal employment and sex, there will be a significant interaction between maternal employment and sex, with the daughters of employed mothers obtaining higher mean scores when compared to daughters of nonemployed mothers.

The results of the two-way analysis of variance performed on the AWS scores (see table 9) indicate that there is no significant interaction between the factors of sex and

Table 17

Mean Scores and Standard Deviations for Groups Classified by
Maternal Employment on AWS Total Score

	Mean	Standard Deviation
Mother employed ^a	125.19	18.82
Mother nonemployed ^b	118.25	22.32

a mother employed $\bar{n} = 42$
mother nonemployed $\bar{n} = 87$

maternal employment status affecting scores on the AWS. These results suggest that sex and maternal employment status do not interact to influence the expressed sex role attitudes of the individuals examined in this study. These results led to the failure to reject the null hypothesis.

3. There will be significant differences on the average AWS scores representing expressed sex-role attitudes when men and women are compared with women obtaining the higher mean score.

The results of the two-way analysis of variance performed on the AWS scores (see table 9) indicate that there is a significant difference between the mean AWS scores obtained by men and women ($F=19.03$ $p < .001$). Examination of the mean scores on the AWS indicates that women obtained the higher mean score (see table 18). These results suggest that women express less traditional sex-role attitudes when compared to men. On the basis of these results the null hypothesis was rejected.

4. There will be significant differences on the average AWS scores representing expressed sex role attitudes when three occupational groups are compared.

The results of the one-way analysis of variance performed on the AWS scores (see table 10) do not indicate the presence of significant difference among the 3 groups on AWS mean scores. These results suggest that the three occupational groups do not differ in their expressed sex role attitudes. These results led to the failure to reject the null hypothesis.

Table 18
Mean Scores and Standard Deviations for Groups Classified by
Sex on AWS Total Score

	Mean	Standard Deviation
Male ^a	111.96	23.23
Female ^b	127.28	17.21

a male $\bar{n} = 57$
female $\bar{n} = 72$

Results of the Case Studies

The results of the individual case studies will not be presented here. The reader is referred to Appendix 7 for the presentation of individual cases. This section will attempt a general summary of the case studies in terms of their support for the research hypotheses.

The review of the literature led to the expectation that men and women would differ in their covert sex-role attitudes as reflected in their orientation towards career choice. It was expected that these covert attitudes would appear in the interviews as men and women gave their reasons for choosing their vocations. It was expected that men would choose jobs which they perceived as matching their abilities, interests, and personalities, while women would choose jobs which would, in some way, facilitate interpersonal relationships. It was also expected that men would be more likely to have worked at a wide range of jobs and to have been personally acquainted with someone in their chosen profession.

The women interviewed in this study did appear to have a more interpersonal orientation towards job choice. Some subjects specifically mentioned rejecting jobs because they would not involve interpersonal relations. As expected, the type of work involved in the jobs varied widely (industrial or public relations, nursing, teaching). However, the women cited interpersonal relationships as somehow involved in all these jobs and as attracting them to this field. In contrast, the men

in the study seldom mentioned the importance of interpersonal relationships in job choice except if they had entered a traditionally feminine profession. If they rejected jobs, lack of ability, interest, or motivation appeared to be behind the decision for rejection. The job history of the subjects interviewed also conformed to expectation in that males reported more extensive job experience. However, no female reported a total lack of employment experience. Personal acquaintance with a person in the field chosen appeared more often for women. However, in the case of women, the acquaintance was frequently a parent. Contact with members of the profession outside the family unit appeared equally for males and females. In general, the case studies support the hypothesis that men and women differ in their covert sex-role attitudes as reflected in the job choice process. These interviews provide evidence for differences between men and women which were not evident in the psychometric data.

The literature suggested that the traditionalism of covert sex-role attitudes would be related to the traditionalism of the sex-role models observed during early years. It was expected that subjects interviewed would show less traditional covert sex-role attitudes if their mothers had been employed. Like the psychometric data, the case studies suggested that covert sex-role attitudes as reflected in job choice were more related to the field of choice than to maternal employment

status when interpersonal emphasis on job selection was considered. However, differences were found between the children of employed and nonemployed mothers in other aspects of the job selection process. For both males and females, it appeared that maternal employment was related to the traditionally masculine tendency to consider, if not ultimately choose, a wide range of jobs including jobs nontraditional for their sex. It also appeared that daughters of working mothers had followed the masculine trend of working at several jobs during adolescence so that they had more experience in the working world than did the daughters of nonemployed women. Thus, the case studies, which provide more information than the psychometric data, supported the expectation that nontraditional covert sex-role attitudes as reflected in job choice are found in the children of working mothers.

The literature suggested that covert sex-role attitudes should be related to sex-typed behaviors. It was expected that those registered in traditional masculine or feminine jobs would express covert sex-role attitudes which were in keeping with the sex-typing of that field. It was expected that this would hold true regardless of the actual sex of the individual, particularly in the case of women. The results of the case studies support this expectation. Those in traditionally feminine occupations expressed an emphasis on interpersonal relationships in selecting their careers. This was true of men as well

as women. Similarly, those in traditionally masculine fields chose jobs more because of specific aspects of the jobs which appealed to their interests or abilities. There was little evidence suggesting that this nontraditional orientation to job choice was more pronounced for women in traditionally masculine fields than for men in traditionally feminine fields. These results are in keeping with those obtained from the psychometric data.

— Expressed sex-role attitudes were also examined in this study. The subjects were questioned regarding their future plans in terms of career and family commitments. Women were questioned regarding their plans and the attitudes they hoped their husbands would hold towards their plans. Men were questioned as to the attitudes they hoped their wives would hold regarding career and family commitments. It was expected that the subjects with employed mothers would express more liberal attitude towards sex roles. The results of the case studies support this expectation. Females with employed mothers were more likely to mention plans to combine career and family responsibilities when compared with the daughters of nonemployed mothers. Similarly, the sons of employed mothers were more likely to anticipate and support their wives working after the arrival of children when compared to the sons of nonemployed mothers. These results are similar to those found with the psychometric data.

In general, the results of the case studies concur with those found using psychometric data. However, more support is found for the existence of differences in sex-role attitudes between children of employed and nonemployed mothers using the case study data.

CHAPTER IV

DISCUSSION

This chapter discusses the results of the testing of hypotheses which have been presented in Chapter III. The chapter will be divided into two sections. The first section discusses the statistical and case study results within the framework of the theoretical rationale presented in Chapter I. The second section provides some suggestions for further research based on the results of this study.

Discussion of Research Hypotheses

The major research hypotheses will be restated in this section, followed by a summary and discussion of the relevant results. For purposes of clarity, the hypotheses will be grouped according to the conceptual areas examined in this study. Minor hypotheses, which focus on expressed attitudes, will be discussed in the context of the major hypotheses which examine the same differences at the covert level.

The first two major hypotheses are:

1. When covert sex-role attitudes of men and women are contrasted using the masculine oriented factors of the OCQ and Gough Fe, men will obtain the higher scores.
2. When covert sex-role attitudes of men and women are contrasted using the feminine oriented factors of the OCQ and Gough Fe, women will obtain the higher scores.

The theoretical rationale of this study suggested that sex-role attitudes and behaviours are acquired through observation and imitation of the same sex parent and that parents are more influential than later models encountered by the individual. It was expected that, in childhood, most subjects had observed traditional models, despite maternal employment, because their formative years occurred prior to the Women's Liberation Movement. Therefore, it was predicted that the subjects would continue to show traditional sex-role attitudes at the covert level.

The results of the statistical analyses performed on the Gough Fe total and factor scores provided some support for both hypotheses. In keeping with expectation, men scored significantly higher on the traditionally masculine tendency to prefer aggressive activity than did women. The hypothesis examining feminine factors received support from the significant differences found between men and women on the traditionally feminine tendencies to describe oneself as prone to neurotic emotionality and to prefer traditionally feminine activities. In both cases, women obtained the higher scores in keeping with expectation.

However, the statistical analyses performed on the OCQ factors provided little support for these hypotheses. A significant difference was found between men and women on the importance placed on sound judgement, but the difference was not in the

direction predicted since women scored higher on this traditionally masculine variable than did men. A significant difference supporting the hypotheses was found on the importance placed on physical self-improvement. As predicted women placed significantly more importance on this variable. These results suggest that the development of a masculine or feminine orientation towards work may be related to other than parental models experienced in childhood. The study by Almquist and Angrist (1971) reviewed previously has suggested that other models such as professors or acquaintances within a profession may influence the choice of an occupation. Another recent study (Wertheim, Widom and Wortzel, 1978) suggested that, while a masculine or feminine sex-role orientation is related to the choice of a masculine or feminine vocation, these orientations are not related to gender. Since there is evidence that occupational choice may be dependent on other than parental influences, it is not surprising that only one significant difference supporting the hypotheses was found on the OCQ.

The results of the case studies provided some support for the expectation that men and women would differ in their covert sex-role attitudes as reflected in the orientation towards occupational choice in spite of the lack of support found on the OCQ. The results suggested that women did place more emphasis on interpersonal relationships in selecting their occupations regardless of the specific tasks involved in that occupation.

Interest in interpersonal relationships was shown by female subjects 2,3,4,10,12,17, and 18, involving approximately two-thirds of the sample. However, only three males, two of whom were in the Education faculty, cited interpersonal relationships as influencing their occupational choice (7, 19,20). Women also tended to reject jobs because they lacked interpersonal involvement. Subjects 3 and 12 gave this factor as a reason for rejecting other occupations considered. In contrast, men mentioned a lack of motivation for ~~extremely~~ competitive fields or an unsuitable temperament for the job (13, 16, 19).

The results of the testing of minor hypotheses, which concern themselves with expressed attitudes, suggested that sex differences in sex-role attitudes also occurred at the expressed level. In keeping with previous research, both sexes expressed liberal attitudes towards sex role although the women expressed more liberal attitudes than the men. Comparison between the norms established for men and women in the standardization sample in 1971-72 and the means obtained in this study in 1976-77 provided support for the suggestion that sex-role attitudes are becoming more liberal. The 1971-72 male sample obtained a mean score of 89.26, while the males in this study obtained a mean score of 111.96. For females, the mean scores for the 1971-72 sample and the females in this study were 102.04 and 127.28, respectively.

In summary, it may be said that this study presents some evidence suggesting that men and women differ on both covert and

expressed sex-role attitudes. It appears that differences between the sexes occur primarily in the areas of stereotyped personality characteristics. Masculine and feminine orientations towards occupational choice did not appear to be related to gender on the psychometric data although case study material suggests that other methods of measurement might have found significant differences. Expressed sex-role attitudes were liberal for both sexes although men expressed more conservative attitudes than women.

The next two major hypotheses are:

3. When covert sex-role attitudes are contrasted according to sex and two levels of maternal employment using the masculine oriented factors of the OCQ and the Gough Fe, there will be a significant interaction between sex and maternal employment. It is expected that women with employed mothers will obtain higher scores when compared with women with nonemployed mothers.
4. When covert sex-role attitudes are contrasted according to sex and two levels of maternal employment using the feminine oriented factors of the OCQ and the Gough Fe, there will be a significant interaction between sex and maternal employment. It is expected that men with employed mothers will obtain higher scores when compared with men with nonemployed mothers.

The theoretical rationale of this study suggested that early exposure to a nontraditional model in the same sex parent would be related to the subsequent development of nontraditional sex-role attitudes in college-age adults. Therefore, it was expected that the subjects whose mothers had been employed would show less traditional sex-role attitudes at the covert level than those whose mothers had not been employed during their early years.

The results of the analyses of variance performed on the OCQ and Gough Fe factor and Gough Fe total scores provided no support for these hypotheses. A significant difference was found between sons of employed and nonemployed women on the "social orientation" factor. However, the results suggested that sons of employed mothers expressed less concern with interpersonal relationships, which was contrary to expectation.

The lack of support for the research hypotheses suggests that the presence of nontraditional models in the parents is not related to either general or occupational orientation covert sex-role attitudes. Given the data presented above for hypotheses 1 and 2, the lack of support for differences between the children of employed and nonemployed mothers on the OCQ is not surprising, based on the suggestion that covert sex-role attitudes as reflected in the orientation towards occupational choice may be related to other than parental models. The failure to find support for the hypotheses on more general attitudes, as measured by the Gough Fe, is more difficult to explain. Perhaps the time period during which these subjects were socialized has some bearing on the results obtained. Although the studies previously reviewed have suggested that the roles of the parents change when the mother is employed, studies conducted during the time the subjects of this study were children suggest that the roles acted by the parents might not have been changed by maternal employment at that point in time (Blood and Hamblin, 1958, Hoffman, 1960 and Geiken, 1964). (Blood and Hamblin(1958)

studied 60 university student couples. Their results suggested that men with employed wives and children did not devote significantly more time to housework when compared to men with nonemployed wives and children who were comparable in SES, educational level, number of children, religion and years married. Hoffman (1960) found similar results. Geiken (1964) extended her examination of roles to include the amount of time spent with the children and found that men with employed wives did not spend significantly more time with children when compared to men with nonemployed wives who were comparable in time married, number of children and age of children and wife's occupation. These studies suggest that the children of employed mothers may not have observed models who differed from traditional roles to any significant degree.

The results of the case studies, which provided a more indepth examination of covert sex-role attitudes, produced some evidence to suggest that differences existed between the children of employed and nonemployed mothers, although these differences did not appear on the psychometric data. Over 50% of the men and women with employed mothers reported considering, if not actually choosing, occupations which were nontraditional for their sex (4,7,11,12,18,20.). These results are in keeping with the expectations following from the theoretical rationale

in that the children of employed mothers did not reject occupations traditional for their own sex, but were more likely to consider opposite sex-typed professions. Possibly, greater concentration on jobs previously considered on the questionnaires would have revealed differences between the children of employed and nonemployed women in their orientation towards work.

The case studies also suggested that meaningful differences exist between the children of employed and nonemployed women on sex-role ideology when they are questioned about their own future plans. It appears that the introduction of an element of personal commitment produces differences between the two groups regarding career commitment for women. Greater acceptance of career commitment regardless of family responsibilities appeared to exist in virtually all subjects having employed mothers.

The comparison of the children of employed and nonemployed women on expressed sex-role attitudes, which was introduced as a minor hypothesis, suggested that the children of employed mothers were significantly more liberal in their expressed attitudes when compared to the children of nonemployed mothers. These results are in keeping with previous research. However, it should be noted that both groups expressed very liberal attitudes so that the differences would appear to be more statistical than representative of meaningful conceptual differences (i.e., liberal vs. conservative).

In conclusion, it may be said that this study provides little support for the existence of differences between the individuals exposed to traditional or nontraditional parental models when general or occupation related covert sex-role attitudes are examined. The results of the case studies suggest that more examination of the attitudes towards nontraditional vocations might have led to the appearance of greater differences between the two groups. Differences between the two groups did occur when expressed sex-role attitudes are examined, suggesting greater liberalism in the children of employed mothers.

The next two major hypotheses are:

5. When covert sex-role attitudes of three occupational groups are contrasted using the feminine oriented factors of the OCQ and the Gough Fe, subjects in the traditionally masculine occupation will obtain higher scores.
6. When covert sex-role attitudes of three occupational groups are contrasted using the feminine oriented factors of the OCQ and the Gough Fe, subjects in the traditionally feminine occupation will obtain higher scores.

The theoretical rationale of this study suggested that same-sex models are important to the development of covert sex-role attitudes. While it was suggested that the same sex parent should be the most potent model, other same-sex models, such as professors or workers in the chosen occupational field, might be powerful models if nontraditional occupations are chosen.

The results of the statistical analyses performed on the OCQ produced significant differences on both masculine and feminine factors among occupational groups as they are reflected

in the field of study. In most cases, the results were in the direction predicted. Education and General Arts and Sciences students placed more importance on the feminine "social service" factor than did Management students. In contrast, Management students placed importance on the OCQ variables indicative of a masculine orientation toward job choice. More specifically they tended to place more importance on "strong moral character and determination" and "sound judgement".

Two differences were found which were not predicted. Management students showed more desire for "social self-improvement " a feminine factor than did Education students. Possibly these students felt that social skills will be necessary in the business world. Management students also showed significantly less interest in outdoor work, a masculine factor than did Education students. Although this is a traditionally masculine reason for choosing an occupation, the results are not surprising as the students identified as entering a traditionally masculine field would, because of the nature of that field, have little opportunity for outdoor work. Therefore, the finding that they placed little importance on outdoor work in choosing a vocation seems reasonable.

The more general covert sex-role attitudes measured by the Gough Fe did not appear to be related to occupational field of study except that Management students expressed less interest

in the traditionally masculine jobs as measured by Gough Fe factor 7 that did Education students. This difference was not predicted and so provides no support for the hypotheses.

The results of the OCQ are supportive of the suggestion that the covert attitudes influencing occupational choice may be related to other than parental models. The results of this study are consistent with the study by Wertheim et al. (1978) mentioned previously. These authors employed a similar research design to that used in this study. Male and female graduate students in two traditionally male fields (law and business management) and two traditionally female fields (education and social work) were assessed on attitudinal, aptitude, and demographic variables. Their results suggested that sex-role attitudes are related to career choice for each sex. Expressiveness as measured by the Femininity Scale of the Personal Attributes Questionnaire and liberal attitudes on the AWS were related to choice of a traditionally feminine profession. An instrumental orientation, as measured by the Masculinity Scale of the PARI and conservative attitudes on the AWS were related to the choice of a traditionally masculine profession.

The lack of support for the hypotheses by the Gough Fe is in contradiction to previous research (Clayton, 1970; Davids, 1966; McKenzie; 1972). Possibly these results may be related to social change. Items concerned with sex-typed activities and

occupations are prominent on the Gough Fe. Since interest areas appear to be more amenable to social change than personality characteristics (Kristal, Sanders, Spence and Helmreich, 1975), the covert attitudes related to interest areas may have been affected in this age group. It seems reasonable to suggest that these interest areas and occupations may have formerly been the items discriminating among occupational groups.

The case studies also produced some evidence to support the hypotheses. Both sexes registered in Education emphasized interpersonal relationships in choosing their careers, while Management students of both sexes emphasized a more instrumental orientation. In general, the Arts and Sciences students appeared to be more similar than different to the Education sample. The case studies suggest that there may be a large number of students in this category who are planning to enter person-oriented or social service professions after completion of a B.A. or B.Sc. Of the six students not enrolled in nursing interviewed for this study four planned social service types of careers (social worker, doctor, child psychotherapist, recreation director). If these cases are truly representative of that group, a feminine orientation seems logical.

The results of the comparison of expressed sex-role attitudes among faculties, which was introduced as a minor hypothesis, revealed no significant differences among the three occupational groups. These results suggest that sex-role

attitudes bear no relationship to the sex-typing of occupational groups in this study.

In conclusion, it seems possible to say that this study provided some support for the suggestion that models other than parents may influence the covert sex-role attitudes which are related to occupational choice. It also appears reasonable to suggest that expressive or instrumental covert sex-role attitudes are related to entry into a feminine or masculine field of study, respectively.

Suggestions for Future Research

The preceding section has discussed the results of this study. It is the purpose of this section to present some suggestions for future research which have been derived from the results of this study.

It has been suggested, on the basis of the results of this study and other recent research, that covert sex-role attitudes are related to occupational choice. However, these specifically work-related attitudes were not significantly related to parental models. Another study (Almquist & Angrist, 1971) has suggested that other models may be important to occupational choice. It seems possible to suggest that in specialized areas of behaviour, such as occupational choice, later modeling experiences may have more impact than early modeling experiences with parents. Future research might

profitably examine the relative importance of parental models as opposed to later models in determining occupational choice.

This study has examined the attitudes of students registered in differing fields of study. These fields were chosen to represent differing occupational fields. However, study of individuals actually employed in these fields is required before these results can be generalized to workers in these fields. The study by Wertheim et al. (1978) has examined graduate students and found the same trends. Future research might examine the attitudes of recent graduates now working in these differing occupations.

SUMMARY AND CONCLUSIONS

This study investigated the relationships between sex, maternal employment and fields of study, and two types of sex-role attitudes. Previous investigations had suggested that maternal employment was related to liberal sex-role attitudes and nontraditional occupational choice in both sexes. However, more recent research had suggested that expressed sex-role attitudes were becoming more liberal in college students, although covert attitudes remained conservative. This study hypothesized that same-sex parental models would influence covert attitudes and behavior, while later models would have superficial effects which would be observed only in expressed sex-role attitudes.

The results of the study suggest that covert sex-role attitudes, as expressed in the orientation towards occupational choice, are related to the sex-typing of the field of study, but are not related to parental models or sex. To summarize, a covert masculine orientation towards occupational choice was related to choice of Management as the field of study and a covert feminine orientation was related to the choice of Elementary Education as the field of study. A general measure of covert sex-role attitudes showed traditional attitudes in both sexes but, once again, these differences bore no relationship to maternal employment nor did they relate to the field of study.

Expressed sex-role attitudes did not appear to be related to sex-typed behavior. Sex differences and differences between children of employed and nonemployed mothers appeared which were in keeping with previous research. Women were more liberal than men and children of employed mothers were more liberal than children of nonemployed mothers. Although these results support the importance of parental models in the development of sex-role attitudes, the scores are, in general, so liberal that the differences may have little meaning in distinguishing liberal and conservative viewpoints.

While parental models did not appear to be related to covert attitudes on the psychometric data, the case studies suggested a more pronounced difference between the children of employed and nonemployed women. It was suggested that wider questioning regarding vocational planning and the addition of an element of personal commitment produced these results.

Suggestions for further research were drawn from the results of this study. The results of the examination of covert sex-role attitudes related to occupational choice suggested that these attitudes may be influenced by models other than parents. Further research examining the influence of parents and other models on occupational choice was suggested to verify this conclusion. Secondly, research on graduates employed in traditionally masculine and feminine fields was suggested. Such research would help to clarify the extent to

which the results of this study of college students can be generalized to employed adults.

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APPENDIX 1

DISTRIBUTION OF GENERAL ARTS AND SCIENCES GROUP
BY FACULTY

APPENDIX 1

Distribution of General Arts and Sciences
Group by Faculty

Faculty	<u>n</u>
Social Science	5
Arts	8
Physical Education	3
Natural Science	9
Nursing	25

Percentages of Males and Females Enrolled in
Faculties Included in General Arts and
Sciences Sample I976-77

Faculty	% Males	% Females
Arts	39	61
Social Sciences	58	42
Psychology	41	59
Physical Education	51	49
Science and Engineering	75	25
Nursing	2	98

APPENDIX 2

DEVELOPMENT OF THE OCCUPATIONAL CHOICE
QUESTIONNAIRE (OCQ)

APPENDIX 2

DEVELOPMENT OF THE OCCUPATIONAL CHOICE
QUESTIONNAIRE (OCQ)

The Occupational Choice Questionnaire, designed to measure masculine and feminine orientation towards work, was developed from relevant appendix items from the Douvan and Adelson (1966) interview study of adolescents. Reasons cited for job choice, suggested areas for self-improvement, and admired qualities in role models obtained from the interview were made into questionnaire items. Each of the items demanded response on a continuum ranging from 0 to 7. The subjects were asked to rate the importance of each variable for their job choice. The importance of different variables for self-improvement or admiration of others was also assessed on a continuum. The questionnaire demanded certain yes-no responses pertaining to part-time employment, employment in the chosen field, or personal acquaintance with individuals in the field. The original questionnaire, which follows this description, contained 34 items.

Following the preliminary administration of the questionnaire to 100 students, the questionnaire was factor analyzed using a principal component analysis with varimax rotation.

Five major factors were obtained from this questionnaire. Each factor contained six items. Two types of reliability were established for this version of the questionnaire. All item scores were correlated with the total score for this factor. Generally, the correlations were above .50 with the exception of factor 4 in which some items correlated in the .25 to .40 range. Split-half reliability coefficients were also computed. The totals for the first and last three items were correlated and the Spearman-Brown formula for correction was employed. The reliability coefficients obtained range from .53 to .89.

Examination of the items contained in the five factors obtained suggested that these factors reflect different concerns which will now be described. The first factor seemed to be measuring an orientation towards social status. Items measuring concern with social status such as good looks,

popularity, and the appearance of success at work (such as admiration from others and leadership) were found in this factor. The second factor seemed to reflect a general desire for self-improvement. It contained items suggesting a desire for self-improvement in character traits, social skills, and physical health and appearance. Valued characteristics in people seemed to be the focus of the third factor containing similar items to those found in the self-improvement factor. The fourth factor seemed to reflect a social service orientation. Items measuring the value of meeting people, social service, work with children, and success in family life appeared as contributors to this factor. The final factor seemed to be somewhat related to job autonomy as items measuring the desire for independence, leadership, and travel were important to this factor.

It appears that factors 1 and 4 are feminine factors, while factor 5 is a masculine factor as the items contained in these factors have been associated with either the masculine or feminine orientations. Factors 2 and 3 cannot be clearly identified with either orientation as they contain items reflecting both masculine and female orientations.

The final questionnaire contains 25 items. As few students knew members of their chosen profession personally or had worked in the field, the yes-no questions were dropped from the questionnaire. Copies of the preliminary and final versions of the questionnaire follow this description.

The final questionnaire was also factor analyzed, yielding the nine factors described in Chapter II. Each factor in the final questionnaire is more definitely of a masculine or feminine orientation.

The test-retest correlation coefficients were all statistically significant. The correlations ranged from .32 to .70, the majority being approximately .50. Since the subjects were asked to simply mark a continuum without specific check points such as numbers, the correlations seem reasonably high.

APPENDIX 2

DEVELOPMENT OF THE OCCUPATIONAL CHOICE
QUESTIONNAIRE (OCQ)Preliminary Questionnaire

Subject No. _____

Sex M _____
F _____Faculty in which you are studying _____
Dept. _____

Age _____

Father's occupation _____

Full-time _____

Part-time _____

Seasonal _____

Mother's occupation _____

Full-time _____

Part-time _____

Seasonal _____

If mother employed, did her employment begin
_____ before you were in school?
_____ during your elementary school years?
_____ during your secondary school years?
_____ during university

=====

1. Rate the following according to your expectations regarding
your future life:

Do you expect to leave school and enter an occupation after
this academic year?

very likely_____
very unlikely

Do you expect to marry and become a homemaker within a year?

very likely

very unlikely

Do you expect that your future will involve an occupation followed by marriage and homemaking activities?

very likely

very unlikely

Do you expect that your future will involve the completion of your education followed by marriage and homemaking activities?

very likely

very unlikely

Do you expect that your future will include the completion of your education, marriage and continuous employment?

very likely

very unlikely

2. Name job or field of work you hope to enter _____
3. Do you know anyone who is in this field now?
Yes _____ No _____
4. Rate the relative importance of each of the following in determining your job choice by putting a check mark at the appropriate place on the line beneath each item.

Interest in work

very important

very unimportant

High pay, status

very important

very unimportant

Job security

very important

very unimportant

Outdoor work

very important	very unimportant
----------------	------------------

Independence, being one's own boss

very important	very unimportant
----------------	------------------

Opportunity to meet people

very important	very unimportant
----------------	------------------

Social service

very important	very unimportant
----------------	------------------

Opportunity to work with children

very important	very unimportant
----------------	------------------

Appropriateness of job for people of your sex

very important	very unimportant
----------------	------------------

Opportunity to travel

very important	very unimportant
----------------	------------------

Easy work, easy to get employment in field

very important	very unimportant
----------------	------------------

Opportunity to be admired by others

very important	very unimportant
----------------	------------------

Opportunity to be leader of people

very important	very unimportant
----------------	------------------

Good chance for promotion

very important	very unimportant
----------------	------------------

Job in home town

very important

very unimportant

5. Do you have a part-time job now or have you had a job in the last 12 months?

yes

no

6. If yes, what did you do?

7. Assuming you can change yourself in any way you choose, rate each of the following according to your desire to improve yourself in these areas:

Bettering your moods and dispositions

very important

very unimportant

Assuming more independence and responsibility

very important

very unimportant

Making friends more easily

very important

very unimportant

Developing better conversational skills

very important

very unimportant

Improving your physical appearance

very important

very unimportant

Improving your general health

very important

very unimportant

Improving yourself intellectually

very important

very unimportant

8. Think briefly of people you admire and rate by appropriate check mark the importance of the following in them:

Generosity and kindness

very important

very unimportant

Empathy and understanding -

very important

very unimportant

Success in their work

very important

very unimportant

Success in their family life

very important

very unimportant

Strong moral character

very important

very unimportant

Determination and drive

very important

very unimportant

Soundā judgment

very important

very unimportant

Popular and attractive personality

very important

very unimportant

Good looks and appearance

very important

very unimportant

Final Questionnaire

Code No. _____

Sex M _____
F _____Faculty in which you are studying _____
Dept. _____Age _____ Father's occupation _____
full-time _____
Nationality _____ part-time _____
seasonal _____Mother's occupation _____
full-time _____
Present job part-time _____
choice _____ seasonal _____If mother employed, did her employment begin
_____ before you were in school?
_____ during your elementary school years?
_____ during your secondary school years?
_____ during university?

Check the alternative which matches your expectations of your future:

Single with career _____
Married with family _____
Married with family & employment _____
Married with career, without _____
family _____

Rate the relative importance of each of the following in determining your job choice by putting a check mark at the appropriate place on the line beneath each item:

Interest in work

_____ very important _____ very unimportant

Outdoor work

_____ very important _____ very unimportant

Independence, being one's own boss

very important very unimportant

Opportunity to meet people

very important very unimportant

Social service

very important very unimportant

Opportunity to work with children

very important very unimportant

Opportunity to travel

very important very unimportant

Easy work, easy to get employment in field

very important very unimportant

Opportunity to be admired by others

very important very unimportant

Opportunity to be a leader of people

very important very unimportant

Assuming you can change yourself in any way you choose, rate each of the following according to your desire to improve yourself in these areas:

Bettering your moods and disposition

very important very unimportant

Assuming more independence and responsibility

very important very unimportant

Making friends more easily

very important very unimportant

Developing better conversational skills

very important

very unimportant

Improving your physical appearance

very important

very unimportant

Improving your general health

very important

very unimportant

Think briefly of people you admire and rate by appropriate check mark the importance of the following in them:

Generosity and kindness

very important

very unimportant

Empathy and understanding

very important

very unimportant

Success in their work

very important

very unimportant

Success in their family life

very important

very unimportant

Strong moral character

very important

very unimportant

Determination and drive

very important

very unimportant

Sound judgment

very important

very unimportant

Popular and attractive personality

very important

very unimportant

Good looks and appearance

very important

very unimportant

APPENDIX 3

QUESTIONS USED IN STRUCTURED
INTERVIEW

APPENDIX 3

QUESTIONS USED IN STRUCTURED
INTERVIEW

1. Have you considered any jobs besides the one you've named on the questionnaire?
2. Do you feel very committed to your present job choice or do you think you might change your mind again?
3. Can you explain a bit why, in your own mind, you think "X" is a good career for you?
4. What leisure time activities did you engage in while you were in school?
5. Did you do these things with your family? Were they interested in these activities too?
6. Did you hold part-time jobs during your adolescence?
7. Did these jobs influence your present job choice?
8. Did your father seem satisfied with his job?

Questions asked only of subjects with
employed mothers

1. Did your mother seem satisfied with her job?
2. Do you think that your mother chose to work?
3. Do you feel that your mother had trouble meeting her career and family commitments?
4. Do you feel that your dad was happy with your mother working?

Questions asked only of subjects with
nonemployed mothers

1. Do you think your mother would have liked to work?
2. How do you think your dad would have felt if your mom had decided to work?

All female subjects

1. Do you think your mom would like you to have the same lifestyle she had?

All subjects

1. Would you like the lifestyle that your parents had with your mother working (or nonworking, according to subject's history)?
2. What sort of opinions would you want your husband (or wife, for males) to have regarding career-oriented wives?

APPENDIX 4

CONDESCRIPTIVES FOR DEPENDENT VARIABLES

Condescriptives for OCQ Factor Scores

	Factors								
	1	2	3	4	5	6	7	8	9
Kurtosis	17.22	-.30	.18	.27	.83	1.41	.26	.28	.59
Skewness	2.70	.20	.49	.62	.85	1.02	.29	.60	-.22
Minimum	-1.70	-1.92	-1.97	-2.20	-1.93	-1.99	-2.54	-1.99	-3.64
Maximum	6.95	2.50	2.88	3.00	3.58	3.69	3.07	2.94	2.05
Range	8.70	4.42	4.85	5.21	5.51	5.68	5.61	4.93	5.69

Condescriptives for Gough Fe Scale Factors and Total Score

	Factors						
	1	2	3	4	5	6	7
Kurtosis	-.72	-.04	.78	.09	-.09	1.13	.75
Skewness	-.20	-.55	-.87	-.18	.34	-1.07	-.90
Minimum	-2.18	-2.86	-2.91	-2.73	-2.41	-3.43	-3.37
Maximum	1.92	2.23	1.75	2.51	2.88	1.83	1.69
Range	4.10	5.08	4.66	5.24	5.29	5.26	5.08
<u>Total Score</u>							
Mean			20.64				
Standard Error			.38				
Standard Deviation			4.27				
Variance			18.26				
Kurtosis			-.20				
Skewness			-.41				
Minimum			7.00				
Maximum			29.00				
Range			22.00				

Condescriptives for Attitudes Towards
Women Scale Total Score

Mean	120.51
Standard Error	1.89
Standard Deviation	21.42
Variance	458.80
Kurtosis	.58
Skewness	-.72
Minimum	47.00
Maximum	163.00
Range	116.00

APPENDIX 5

PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS BETWEEN
DEPENDENT VARIABLES, AGE, AND SES

Pearson Product Moment Correlation Coefficients between
Dependent Variables, Age, and SES

OCQ Factors	Age	SES
1	-.004	.087
2	-.062	-.010
3	.185	-.080
4	-.049	-.011
5	-.047	-.182
6	.069	.050
7	-.074	-.063
8	-.026	-.075
9	.126	.011
Gough Fe Total	-.138	.006
AWS Total	-.075	.109

Pearson Product Moment Correlation Coefficients
between Dependent Variables

OCQ Factors	Gough Fe Factors							AWS Total
	1	2	3	4	5	6	7	
1	-.002	-.211	-.073	-.108	.157	-.044	-.011	-.222
2	.036	.048	.258	.052	-.270	.183	-.086	.175
3	.075	.085	-.054	-.064	-.134	-.003	-.014	-.061
4	.093	-.042	-.220	-.049	.159	.096	.019	-.215
5	.204	.048	-.111	-.006	.018	-.167	.187	-.169
6	.026	.057	-.071	-.088	.118	.068	.010	-.106
7	-.012	.122	.044	-.012	-.021	.130	-.140	.096
8	-.002	-.007	-.060	-.142	.108	.122	-.028	-.204
9	-.132	-.172	-.043	.018	.001	.030	-.018	-.010
Gough Fe Total								.275

APPENDIX 6

RESULTS OF ANALYSES OF VARIANCE, MEAN SCORES, AND
STANDARD DEVIATIONS OF DEPENDENT VARIABLES
BY SES AND NATIONALITY

Mean Scores and Standard Deviations of Groups Classified
by Three Levels of Socioeconomic Status on OCQ
Factor Standard Scores

SES Group	n	Factors																	
		1		2		3		4		5		6		7		8		9	
		$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$	$\bar{M}$	$\underline{SD}$
High	74	-.12	.85	.01	.99	.07	1.03	.02	1.03	.15	1.04	-.03	.93	.03	1.02	.04	1.04	.01	1.06
Middle	21	.35	1.59	.04	1.12	-.08	1.12	-.09	1.04	-.12	.81	.01	1.12	.09	1.04	.09	1.10	-.07	.87
Low	34	.03	.80	-.03	.97	-.11	.86	.01	.92	-.25	.98	.06	1.10	-.13	.95	-.15	.85	.04	.96

Mean Scores and Standard Deviations of Groups Classified
by Three Levels of Socioeconomic Status on Gough Fe
Scale Standard Scores for Factors and
Total Score

SES Group	n	Factors														Total	
		1		2		3		4		5		6		7		M	SD
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD		
High	74	.10	1.07	.03	1.00	-.01	1.01	.03	.99	-.11	1.02	.03	.94	.03	.97	20.51	4.32
Middle	21	-.00	.97	.03	1.07	-.03	1.25	-.04	1.02	.38	.76	.11	.61	.11	.90	21.43	3.97
Low	34	-.22	.83	-.08	.98	.02	.83	-.04	1.04	.01	1.04	.13	1.29	.01	1.13	20.44	4.43

Mean Scores and Standard Deviations of Groups Classified
by Nationality on OCQ Factor Standard Scores

Nationality Group		Factors																	
		1		2		3		4		5		6		7		8		9	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Eng. Can.	113	-.04	.09	.04	1.00	-.03	.98	.03	.99	-.05	1.00	-.04	.97	.08	.94	.04	.99	-.01	.99
Fr. Can.	5	.59	.29	-.66	1.20	.51	.74	-.48	.84	.59	.58	.28	.93	-.67	1.18	-.28	.91	1.09	.80
European	6	.25	.53	.07	.78	-.23	.89	.49	1.16	.73	1.04	.91	1.53	-.53	1.75	.35	1.12	-.24	.79
Other	5	-.02	.46	-.42	1.01	.46	1.66	-.82	.88	-.29	.99	-.41	.50	-.46	.64	1.03	.75	-.63	.91

Mean Scores and Standard Deviations of Groups Classified
by Nationality on Gough Fe Scale Standard Scores
for Factors and Total Score

Nationality Group	n	Factors														Total	
		1		2		3		4		5		6		7		M	SD.
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD		
Eng. Can.	113	-.01	1.01	.04	1.01	-.03	1.03	.02	.94	.04	1.02	-.05	.96	-.02	1.02	20.77	4.35
Fr. Can.	5	-.05	1.30	-.58	1.37	.39	.62	-.60	.85	-1.00	.95	-.18	1.15	.25	.90	18.60	4.39
European	6	-.24	.99	.31	.37	.07	.80	-.33	1.69	-.34	.73	-.58	1.63	-.01	.64	19.50	2.43
Other	5	.36	.81	-.79	.51	.32	.90	.54	1.37	-.45	.85	-.24	.95	.14	1.20	21.20	4.50

Results of Analyses of Variance for Testing OCQ Factor Standard
Scores by Socioeconomic Status

Source	df	Factor 1			Factor 2			Factor 3		
		MS	F	p	MS	F	p	MS	F	p
Between groups	2	1.80	1.83	ns	.03	.02	ns	.44	.44	ns
Error	126	.99			1.02			1.01		

Source	df	Factor 4			Factor 5			Factor 6		
		MS	F	p	MS	F	p	MS	F	p
Between groups	2	.11	.10	ns	2.17	2.21	ns	.11	.10	ns
Error	126	1.01			.98			1.01		

Source	df	Factor 7			Factor 8			Factor 9		
		MS	F	p	MS	F	p	MS	F	p
Between groups	2	.43	.43	ns	.53	.53	ns	.11	.11	ns
Error	126	1.01			1.01			1.01		

Results of Analyses of Variance for Testing Gough Fe Scale
Standard Scores for Factors and Total Score by Socio-
economic Status

Source	df	Factor 1			Factor 2			Factor 3		
		<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between groups	2	1.23	1.23	ns	.16	.15	ns	.01	.01	ns
Error	126	1.00			1.01			1.02		

Source	df	Factor 4			Factor 5			Factor 6		
		<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between groups	2	.08	.08	ns	2.02	2.06	ns	.46	.45	ns
Error	126	1.01			.98			1.01		

Source	df	Factor 7			Total		
		<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between groups	2	.17	.17	ns	7.78	.42	ns
Error	126	1.01			18.43		

Results of Analyses of Variance for Testing OCQ Factor Standard Scores by Nationality

Source	df	Factor 1			Factor 2			Factor 3		
		MS	F	p	MS	F	p	MS	F	p
Between groups	3	.75	.75	ns	1.12	1.12	ns	.92	.92	ns
Error	125	1.01			1.00			1.00		

Source	df	Factor 4			Factor 5			Factor 6		
		MS	F	p	MS	F	p	MS	F	p
Between groups	3	2.09	2.15	ns	1.90	1.95	ns	2.15	2.21	ns
Error	125	.97			.98			.97		

Source	df	Factor 7			Factor 8			Factor 9		
		MS	F	p	MS	F	p	MS	F	p
Between groups	3	1.89	1.93	ns	2.21	2.28	ns	2.76	2.88	*
Error	125	.98			.97			.96		

*p < .05

Results of Analyses of Variance for Testing Gough Fe Scale
Standard Scores for Factors and Total Score by
Nationality

Source	df	Factor 1			Factor 2			Factor 3		
		<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between groups	3	.34	.33	ns	1.87	1.91	ns	.47	.46	ns
Error	125	1.02			.98			1.01		

Source	df	Factor 4			Factor 5			Factor 6		
		<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between groups	3	1.32	1.33	ns	.65	.65	ns	.93	.93	ns
Error	125	.99			1.01			1.01		

Source	df	Factor 7			Total		
		<u>MS</u>	<u>F</u>	<u>p</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between groups	3	.15	.15	ns	10.69	.58	ns
Error	125	1.02			18.44		

APPENDIX 7

CASE STUDIES

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CASE STUDIES

Case Study No. 1

This subject is a female, aged 20, who was completing her first year in the Faculty of Arts. She was considering switching into the Faculty of Management Sciences so that she could major in Commerce. However, she felt that she might change her mind again. She had considered a wide number of fields in the past, including Library Science, Law, and Literature. Commerce appealed to her as she liked to work with numbers and liked to organize material. As she felt she had leadership qualities, she expected that she could handle a managerial role.

It appeared that this subject came from an active family. Her parents enjoyed many activities such as tennis, opera, and sailing. While she did not engage in many activities with her parents, she seemed to have had an active adolescence. She held a part-time job throughout most of her high school years. She had worked in the office of a jewelry store. In her opinion, her introduction to business in this job had influenced her to consider a degree in Commerce..

This subject's mother had not been employed when she was a child. However, the home atmosphere was very supportive regarding careers for women. In her opinion, her mother would have preferred to work. Since her children were now older, her mother had enrolled in a technology course in the hope of obtaining a job. The subject felt that a large family, rather than resistance on the part of her father, had prevented her mother from working earlier. Both her parents and grandparents believed strongly in higher education and had encouraged her to pursue a university degree.

Possibly as a result of her home environment, this subject expressed liberal sex-role attitudes. She agreed with her mother that she would not be satisfied at home and therefore she was planning to have a career. She hoped to marry a man with liberal attitudes towards women working as she disliked the "old male-females roles."

Case Study No. 2

This subject is a female, aged 19, who was completing her first year in the Faculty of Arts. She was planning to enter a school of Social Work after completing a B.A. in Arts. She had considered nursing prior to deciding on a career in social work. She felt very committed to her chosen field. She felt that social work was a good field for her because she had always been interested in why people form attitudes which can cause them problems. She herself had experienced some emotional problems in later high school years and had profited from counseling. She felt that training in social work would help her to understand other people and to help them as she had been helped herself.

It appeared that this subject came from an academically oriented family and had developed similar interests. While she reported a lot of social activity prior to Grade 11, she had become more academic at this point and had begun to spend more spare time concentrating on reading and schoolwork. She had realized at that time that she must achieve academically if she were to develop a worthwhile career. In addition, her interest in reading was shared by other family members. During high school she had worked as a receptionist. While this job was not related to the type of work she preferred, she felt that it had helped her to reach her goals by providing a quiet environment for homework.

This subject's mother had not worked until her two children reached adolescence. The subject felt strongly that her mother had been a very committed homemaker who had remained at home out of choice. She recalled that there were economic pressures when she was young but her mother had still remained at home. Evidently, her father supported his wife's role as homemaker in that the subject felt that he would have objected if his wife had expressed a desire to return to work. However, she felt that his objection would have been based principally on the fact that both she and her brother were frequently ill with asthma as children.

Possibly owing to her mother's commitment to the homemaker role, this subject seemed to hold conservative sex-role attitudes which conflicted with her career ambitions. Both she and her mother felt that she was not the type to stay home and she was determined not "to be dependent on just getting married." However, she agreed with her mother that children should not be sent to daycare centres. It appeared that she was unsure as to what course she would follow so it was

important to her that her husband be prepared to accept changes. However, she seemed to feel that child care and housework would be her responsibility regardless of the circumstances. She felt that her husband should agree to her working if she could still manage home and child care. There was no suggestion that she would expect her husband's role to change if she chose to work.

Case Study No. 3

This subject is a female, aged 19, who was completing her first year in the School of Nursing program at the University of Ottawa. She felt very committed to nursing, and did not think she would change her occupational goals in the future. She appeared to have considered primarily traditional female occupations. Besides nursing, she had considered working as a secretary or occupational therapist. She felt that nursing was a good career choice for her because she enjoyed working with people and feeling that she was being a help to them. She had rejected secretarial work because the tasks did not necessarily involve people. Her interest in nursing also grew out of a longstanding interest in science. She had not considered a degree in science as she had not felt that she was prepared to exert the effort she felt such a course would demand. Nursing for her included sciences at a less complicated level and also met her need to work with people.

This subject appears to have experienced a family atmosphere which was emotionally close but which did not stress a wide range of activities. She did not have many hobbies during adolescence nor did her family tend to engage in many leisure activities together. Nevertheless, they spent considerable time together at home. Although she did not report many hobbies, she appeared to have spent a large amount of her free time working at part-time jobs during her high school years. She had worked in a restaurant, in the armed forces reserves, and in a business office. She felt that her secretarial job had influenced her job choice in that it had helped her to eliminate this type of work as a future occupation. While she had enjoyed her typing course in high school, her secretarial job had led her to the realization that she would not enjoy a job where she was required to sit all day engaged in a mechanical, non-person oriented activity.

This subject's mother had been employed as a secretary since the subject had been a preschooler. It appeared that her mother had experienced some conflict in meeting family

and career needs. Apparently her mother had been a teacher for 15 years before the subject was born and had very much enjoyed her work. She had remained at home for several years but had not been happy. She had returned to a secretarial job which she enjoyed. The subject felt that it was difficult for her mother to cope with her home responsibilities initially, but that the family had adjusted to doing more around the home. Evidently, the family had realized that she was much happier at work, particularly since the father supported his wife's decision to work.

This subject tended to hold liberal sex-role attitudes in that she expected to work. She did not think that she would be satisfied at home and therefore hoped that her husband would agree with her working. However, she had not ruled out the role of homemaker entirely, possibly because she was aware through her mother's experience that work and family responsibilities could prove difficult. She hoped that her future husband would also be happy if she decided to devote herself to homemaking activities on a permanent basis.

Case Study No. 4

This subject is a female, aged 19, who was completing her first year in the School of Nursing at the University of Ottawa. While she had considered other occupations, such as physician, anything she had considered generally fell within the medical field. She had been enjoying her training and felt that she would remain in nursing. She felt that she was suited to nursing as she liked meeting and caring for people. She found that she derived particularly strong satisfaction from helping people through a problem like illness. Nurturing others appeared to be a strong personality trait of this subject as she described herself as always being a "Dear Abby type of person."

This subject seems to have been very active as an adolescent. She enjoyed team sports, both as a participant and coach. She had also enjoyed reading, particularly about doctors and nurses. Her family also enjoyed sports and frequently spent the weekends together skiing. In addition to her sports activities, she held part-time jobs as a cashier and receptionist. She did not feel that these jobs had contributed to her career plans as she had already decided on nursing as a career before holding these jobs.

Her mother's career history seemed to have provided this subject with a strong motivation towards a career. Her mother had returned to work when the subject was in elementary school. At this time she had been a homemaker for about 20 years. It was clear to the subject that her mother had taken a job because she was not satisfied at home. She said of her mother, "After she went back to work you could tell that she always hated staying home and just being a housewife." The subject described her father as a "typical chauvinist" who didn't like to do any housework and felt that he alone should be the breadwinner. Given this orientation, her father had not initially been supportive of his wife working. In fact, her mother had accepted a job and told her father later. Evidently he had protested but had eventually come to accept and adjust to his wife's working. In the daughter's opinion, her father had perceived that his wife was much happier and that her happiness had led to an improvement in their relationship. As a result he had accepted her working regardless of the inconvenience it might cause him. As all children had entered school when her mother began working, she did not recall her mother finding much difficulty managing home and job although the family had to learn to do more for themselves.

Although this subject did not feel that her mother would try to influence her life plan, she seemed to be patterning her future on her mother's lifestyle. She planned to remain at home with preschool children, but definitely planned to return to work after the children entered school. She wanted her husband to approve of this plan. She also expressed the view that her husband's role should change when she returned to work. She stated that she would want her husband to be willing to increase his involvement with and responsibility for the children when she returned to work. In her opinion, society places too much emphasis on the degree to which children need a mother's attention while insufficient emphasis is placed on the necessity for paternal involvement.

Case Study No. 5

This subject is a male, aged 19, who was enrolled in the first year of the Physical Education program. After graduation he hoped to obtain a job in recreation, possibly with the government. Change to another program of study seemed quite likely for this student. He claimed to have made a "last minute decision" to attend university that year and was therefore obliged to quickly choose his courses. He had chosen Physical Education primarily because the other subject areas he had studied in high school had not appealed to him.

If he came to enjoy a new subject area, he felt that he might change his job plans. He was attracted to the Physical Education program not only because he enjoyed sports, but also because he saw it as an important, expanding field. He felt that recreational guidance was becoming more important in society as people are acquiring more leisure time and are turning to hobbies and physical activities. Therefore, he saw a degree in Physical Education as being applicable to working with other adults as well as to teaching in elementary or high schools.

The family environment seemed to have influenced this subject's interest in a career in recreation and physical education. All family members were active in sports such as skiing and hockey. Intermural sports programs had been an important part of this subject's extracurricular activities in school. He had held some summer jobs as a janitor and delivery boy, but saw these positions as solely for financial gain, having no influence on his future career plans.

This subject's mother had not worked when he was a child. Evidently she had become dissatisfied as a homemaker and now worked part-time as a switchboard operator. The subject's father was initially very resistive concerning his wife's employment because the youngest child was still in elementary school. He felt that his wife should be at home when the subject's younger brother returned from school. However, the subject felt that his father had eventually accommodated himself to his wife's employment and had begun to participate more in home and child care. Whenever possible his father returned from work in time to meet his younger brother after school on the days his mother was at work.

Although there had been some changes in his home in terms of the roles taken by his parents in recent years, this subject seemed to have developed traditional sex-role attitudes. While he hoped that his wife would want to work to establish a home before having a family, he hoped that she would be willing to leave her employment after the first child was born.

Case Study No. 6

This subject is a male, aged 19, who was completing his first year in the Faculty of Science. He was majoring in biology and was hoping to enter the University of Ottawa Medical School after his second year. He had also considered engineering as a career. While he felt committed to a career

in medicine, he realized that he might not gain admission to Medical School. Therefore, he saw a change of career plans as distinctly possible for him. He was attracted to medicine as he had always had scientific interests. The subject's father was a doctor. He felt this factor had influenced his choice of medicine as a career. Through his father he felt that he had gained a clear picture of the demands of the profession.

This subject did not appear to have many interests other than sports during his high school years. In the last few years of high school he felt that he had devoted more than the average time to school work because of his future career ambitions. He did not report many activities with his family, possibly because of the demands of his father's work schedule. However, he and his family had enjoyed many vacations together. He had held summer jobs pumping gas or working with a janitorial service. However, these jobs served the purpose of financial gain only. He did not feel that these jobs had influenced his job choice in any way.

This subject's mother had not worked although she was trained as a social worker. He felt that she preferred to remain at home although he admitted that he had not given her feelings regarding employment much thought. He felt that his father would not have objected if his mother had expressed a desire to work.

Although he came from a family in which his parents had assumed traditional sex roles, the subject seemed to have developed liberal sex-role attitudes. He felt that he would be happy regardless of whether his wife chose to work or to remain at home. He said that he could understand why a woman would be dissatisfied at home, particularly if her husband had a career which demanded long working hours as would be the case if he realized his ambition to become a doctor. He felt that his relationship with his future wife might be better if she were career oriented as she would not become dissatisfied with the demands of his career.

Case Study No. 7

This subject is a male, aged 19, who was completing his first year in the Faculty of Arts. He was hoping to become a child psychotherapist, but realized that the employment problems in Canada today might make this impossible. In the event that he could not obtain a job in the field of his choice, he had also considered a career in social work or a

job in the field of sociology. He felt that he might change his mind again as to his future profession as he was in his first year of study and had many other interests such as art and music.* He felt that he would enjoy the work of a child psychotherapist as he liked working and talking with people and had enjoyed his job at a camp for children.

This subject appeared to come from an active family environment, although he stated that they all had different interests. During his high school years he had devoted his hours outside school to sports, painting, sculpting, and guitar. He had held numerous part-time jobs which covered a wide range. He had worked as a busboy, parking lot attendant, cleaner, delivery man for a pizza restaurant, and a guitar teacher. With the exception of his teaching job, these jobs had helped him choose a vocation in that they had clarified what he would dislike.

Both this subject's parents had worked during his childhood. They appeared to be individuals who placed strong emphasis on being happy in their work. His father was a physician who had worked as a surgeon. He had become dissatisfied in his position and was now employed as a professor. He was satisfied with this position because it combined teaching as well as practical application of skills. His mother was employed as a nurse but was currently looking for a position which would allow her more responsibility. As might be expected from her attitude towards her job, this subject felt that his mother had chosen to work. He felt that his parents' attitudes towards women working had a cultural basis. His parents had grown up in Czechoslovakia where female employment is much more common. Consequently, he felt that his mother expected to work. However, he felt that she still preferred to work even in this culture where female employment is not as prevalent. He felt that his father also took his wife's employment as being a matter of course.

This subject expressed very liberal sex-role attitudes, possibly because of the cultural factors he cited in discussing his parents. He would like his wife to work. If children were involved, he would expect his wife to remain at home with the child only during infancy. He would expect that his wife would return to work when the child was one to two years old. While he would like his wife to consider family before career, he put the same demand upon himself.

Case Study No. 8

This subject, a male, was somewhat older than the average student sampled. Although he was a first-year student in the Faculty of Arts, he was 29 years of age. He had left school at age 14 in Ireland. He had worked at many unskilled jobs since that time. He had not enjoyed the jobs he was able to obtain and was interested in the Arts. He was very interested in film and was hoping to go into film production after obtaining a Fine Arts degree.

Since he had been obliged to go to work during early adolescence, he did not have the opportunity for leisure time activities and part-time job experiences which are open to most students in Canada who go on to a university education. He could not attribute his present career plans to either leisure activities or to job experiences during adolescence. However, his interest in a career in film had grown out of watching movies and taking pictures in his leisure time in recent years.

This subject's mother had always worked when he was a child. As is often the case in Ireland, his mother had worked because of financial necessity. Nevertheless, he feels she would also have chosen to work even if it had not been necessary. He reports that both his parents had held many jobs but in the last few years had been highly satisfied owning and managing an antique shop. Possibly his parents' varied careers had led him to the attitude that he could find a satisfying new career although he had already worked for many years.

This subject was already married and had a wife who was employed. He seemed to have liberal sex-role attitudes in that he felt supportive of her continuing to work in the future. He felt strongly that what she did with her life should be "what she wants, not what I want."

Case Study No. 9

This subject is a female, aged 19, who was enrolled in the first year in the Faculty of Management Sciences. She was planning a career as a chartered accountant. She had previously considered a career as a physiotherapist, but had abandoned this idea as she felt the field was too limiting. She felt that it was possible that she might change her career plans again. She had chosen commerce as her field of study because it contained many options. This would allow her to drop her

plan to become an accountant if she did not enjoy the courses without wasting a year of study. She felt that she would probably like accounting because it would combine her preference for math and management.

This subject came from an active family who had many interests. She competed in horseback riding and skiing and enjoyed sailing and tennis. Her family also enjoyed skiing to the extent that her parents ran a ski program. She had found her parents, particularly her mother, to be very supportive of her achievements in horseback competition. Her mother helped her financially and attended most competitions. She had worked in stores on a part-time basis during her high school years. After completing high school in December, she had worked as a sales clerk in a ski shop for approximately eight months before entering university. Her work experience had served to emphasize the necessity of acquiring a good education in order to obtain an interesting job.

This subject's mother had never worked. She felt certain that her mother had preferred the role of homemaker. She was unsure as to what her father's attitude towards a job for her mother would have been as her mother had no desire to work. If it were economically necessary, she felt that her father would definitely agree to her mother working.

This subject felt that her mother had been happy and that she would recommend her lifestyle to her daughter. While the subject would want her husband to be flexible if she changed her attitudes, she appeared to have fairly conservative sex-role attitudes, patterned after her mother's lifestyle. She felt that she would only want to work until the time she had her first child.

Case Study No. 10

This subject is a female, aged 22, who was studying at night in the Faculty of Management Sciences. She was studying first-year level courses. She was pursuing her degree in the hope of gaining advancement in her field (public relations). She was not specific as yet as to how she would use her degree, but felt that she would remain in the business world. She liked public relations because she had many opportunities to meet people and to travel. She felt that these aspects of her job made her more independent and educated as she met many different types of people.

This subject reported that she had been involved primarily in social activities in adolescence. She had never planned for a career. In retrospect, she felt that her lack of interest in a career was the result of her family environment. Her father had died when she was quite young. She had been influenced primarily by her mother and older siblings. Her mother definitely had no career ambitions. The subject described her mother as a shy, introverted woman who had no interests outside the home. Although she did not get to know her father well, she was of the opinion that he might have wished his wife would take a job as she had too few interests. The subject's older brothers and sisters all left school after high school. She did not remember an alternate course of action being suggested to her by her family in the years she was at home. She had worked as a dental assistant and secretary during the summers in high school. As she enjoyed secretarial work, she took the secretarial option in high school. Her interest in a career developed after she began working and found that she was not satisfied as a secretary. She had advanced to a position which was more interesting through her own initiative. She had asked for and received more responsibility and was now quite interested in her job.

It appeared that this subject had undergone considerable change in her sex-role attitudes during her late adolescence and early adult life. Obviously, she had followed her family pattern in holding highly traditional sex-role attitudes in adolescence. Possibly her own boredom and high abilities combined with a supportive work environment had changed her attitudes so that she now derived considerable satisfaction from her career and placed considerable importance on a career. She had married a man who had been supportive of her ambitions. Given her own satisfaction and her husband's contentment with her working, she no longer believed that she would feel satisfied as a homemaker. She planned to continue work in the future.

Case Study No. 11

This subject is a female, aged 19, who was completing her first year in the Faculty of Management Sciences. She was planning to have a career in accounting. She had previously considered a career in teaching, possibly because her mother was a teacher. She had found herself drawn to accounting as she liked mathematics and considered herself to be an analytical person. She felt quite committed to her present career choice.

This subject came from an active family. They enjoyed skiing and golfing together. However, the subject did not feel that her leisure time activities or her summer job as a waitress had exerted any influence on her occupational choice. Her father worked as a chartered accountant. Probably her knowledge of the exact nature of an accountant's work gained from her father had influenced her to consider a career as an accountant.

This subject's mother had begun to work full time as a teacher when the subject entered high school. According to the subject, her mother had definitely chosen to work. As her children were all in school when she began to work again, she had not found it difficult to manage her home and family life since they were old enough to help her with housework. She felt that her father had supported her mother's career. Although her mother had been away from work for many years, she cannot recall her father raising any objection to her decision to return to work.

The subject felt that her mother had been satisfied with her own life and would encourage her daughter to have a career in the future. It appeared that the subject had developed liberal sex-role attitudes and was planning a lifestyle similar to her mother's. She said that she hoped to marry and have children, but planned to return to her career after the children entered primary school. She hoped to marry a man who would accept the fact that she planned a lifestyle which included both childrearing and a career.

Case Study No. 12

This subject is a female, aged 18, who was completing her first year in the Faculty of Management Sciences. She planned a career in industrial relations. She felt quite sure that she would not change her mind as she felt she was appropriately aware of the nature of the work from her present part-time job and would enjoy the work. She had previously considered a career in science but felt that she preferred working with people. She felt that industrial relations would suit her, not only because she liked working with people but also because she liked the challenge involved in solving disputes.

This subject reported many interests and activities during her adolescence. She was involved with the school band, Spanish club and school government. Her family shared her interest in music. She had worked as a clerk in a department

store and also as an usher at the National Arts Centre. She had become a union representative in her job at the Arts Centre. She felt that her satisfying experience with the union had motivated her to choose industrial relations as her future career.

It appears that the home environment was supportive of career commitment for this subject. Her mother had worked since the subject was quite young, although she sometimes had found difficulty in balancing home and career commitments. The subject also perceived her mother as deriving fulfillment from her work. She recalled that her mother had changed jobs several times until she had found satisfying employment as a real estate agent. She felt that her father was basically satisfied with her mother working.

Possibly because work had been important and satisfying in her own life, the subject's mother had encouraged her to develop a career as she did not think that her daughter would be satisfied as a housewife. The subject agreed with her mother and appeared to be patterning her life according to a liberal sex-role ideology. She felt that she would probably always work as she was outgoing and preferred an active life. She felt that her future husband would have to accept the fact that she was career committed.

Case Study No. 13

This subject is a male, aged 18, who was enrolled in the first year of the Faculty of Management Sciences. He hoped to obtain a management position in a business after graduation. He had previously considered a career in chemical engineering. Although he felt that he had ability in math and science, and admired the work of his uncle who was a research chemist, he had rejected this career after much thought. He had realized that he was not willing to devote the time to academics that such a career would demand of him. Through summer employment in a store, he had become acquainted with the work involved in the management of a business. He felt committed to this career as he felt that he was aware of the work involved through his past job and through his father's work in personnel. He was reasonably certain that he would be satisfied as a manager.

The subject reported enjoyment of sports activities with his family during his leisure time during high school. However, he had not engaged in any leisure activities which

had influenced his job choice. He felt that his work experience in the store had been most influential in determining his occupational choice. His employer had taken particular interest in teaching him about the business. As this man had not had the advantage of a college degree, he had strongly encouraged the subject to pursue a degree in business management if he were seriously interested in succeeding in the management field.

This subject's mother had not worked during the years he was at home. However, she had not been satisfied as a homemaker after her children had entered school. She had not entered the work force despite her desire for a career. The subject felt that resistance on the part of his father had been the cause of his mother remaining at home.

Possibly as a result of his mother's conflicts between work and family life, the subject seemed to have developed an ambivalent attitude towards his future wife's role. While he recognized the possibility that his wife might not be happy as a homemaker, he put many restrictions on his wife's career. He did not want his wife to work if any of the children were of preschool age. He also felt if his wife chose to return to work after the children were in school, she should take a part-time job which would permit her to be at home when the children returned from school. Although this subject had developed more liberal sex-role attitudes than his father, he was still unwilling to endorse a lifestyle with truly egalitarian sex roles.

Case Study No. 14

This subject is a male, aged 19, who was enrolled in the first year in the Faculty of Management Sciences. He had also considered a career in engineering, law, or government. He felt that he might change from Business Management if he did not enjoy the course. He felt that a degree in management would be good for him because he liked organizing people. He also was attracted to the variety such a degree might offer him. In his opinion, a degree in management could lead him to industrial management, government administration, or industrial relations.

This subject's family seemed to be very active in community service. Both parents worked on church committees and his mother also worked with the elderly on a volunteer basis. The subject had been very involved in student government and in organizing school activities as a teenager. In

addition to his school activities, he also worked in a restaurant. After gaining some experience, he had become head busboy which involved organizing shifts and timetables. He felt that this job experience plus his experience in organizing activities at school had led him to feel that he would enjoy a managerial career. .

This subject's mother had not worked when he was at home. He felt that she had enjoyed her work before marriage and had wanted to return to work when the children had entered school. However, she had contented herself with volunteer activities because her husband did not want her to work. Evidently the subject's father had felt that he should be responsible for the economic support of the family and that his wife should work at volunteer work she enjoyed.

This subject seemed to follow his father in expressing conservative sex-role attitudes. While he would like his wife to work to help establish a better financial position before having children, he wanted his wife to remain at home to raise the children. He also hoped that his wife would consider his career to be more important than her own as he anticipated that his own career would be very important to him, making him unwilling to sacrifice for his wife's career.

Case Study No. 15

This subject is a male, aged 20, who was completing his first year in the Faculty of Management Sciences. As of yet, he had not made a specific job choice, although he hoped to hold a managerial position of some type in business. The numerous options provided by a degree in management (i.e., politics) and the possibility of high financial rewards seemed to have attracted him to this field. He had previously considered a career in criminology but had felt that he was more inclined to the business world.

This subject's career choice seemed to have been influenced by family interests and his extracurricular activities during high school. He had participated in student politics and the school business club. His father shared his interest in the business world although he was not a businessman himself. The subject had worked at several jobs since the age of 14 (salesman, gas jockey, mechanic) but did not feel that these jobs had influenced his occupational choice.

This subject's mother had returned to work after the children had entered school, in spite of a lack of formal

education. He felt that she enjoyed working and had been able to balance home and family commitments. His mother worked as a full-time secretary-receptionist for his father who was an optometrist. He felt that his father had supported his wife in working as it had not interfered with their family life and had benefited the family financially.

This subject appeared to have developed very liberal sex-role attitudes. Possibly the highly satisfactory arrangement in his own family had influenced him to have a very positive attitude towards careers for married women. He said that he wanted his wife to work and did not want her career to be sacrificed for a family. However, he hoped that she would not be so committed to her career that she would choose not to have children.

Case Study No. 16

This subject is a male, aged 19, was enrolled in his first year in the Faculty of Management Sciences. Although he was considering a career as a chartered accountant, he felt that a change of plans was definitely possible. He had also considered a career in medicine but had decided against this because he felt that the schooling required "too much hassle and competition." He also felt that he could not obtain the grades required to enter medical school. He had also considered law as a career possibility. He had rejected this choice because he felt that law in particular was a field in which there were too many people entering training so that obtaining a job after graduation would be difficult. He stated that he had chosen business management because it offered different options to him. He was attracted to a career as a chartered accountant because he felt that in serving different companies as an accountant, his work would have variety and would not become tedious.

It appeared that this subject had been fairly active in adolescence with sports, student council, and part-time jobs since grade 10. He had worked at a wide variety of jobs (general labor, assembling motor bikes, janitorial work, landscaping) but did not find any of these types of jobs appealing as a career area. Possibly his varied experience had developed his expressed desire for change and different work environments.

This subject had been raised by his mother and step-mother. Both women had been employed during his years at home. He felt strongly that both women had chosen to work,

adding spontaneously that "women can't sit around at home." He did feel that both women had experienced some difficulty managing home and work responsibilities when the children were young. He indicated that meal preparation, for example, had been difficult in the evening. However, he indicated that his father had been content with his wife working.

The experience of having both his mother and step-mother work without too much difficulty seemed to have helped this subject to develop very liberal sex-role attitudes. He stated definitely that he preferred to have his wife work as he felt that women tend to "stagnate" if they remain at home. He hoped that his wife would be genuinely interested in her work. Although he seemed to like the idea of the intellectual companionship a working wife would provide, he appeared to associate economic support of the family with his own work. He indicated that he hoped that he could make sufficient money so that his wife could do work she enjoyed without having to consider the financial rewards that would be given for her work.

Case Study No. 17

This subject is a female, aged 24, who was completing her training in the Faculty of Education in the elementary division. During college she had thought of becoming a recreation director. However, as she had not majored in Physical Education, she had found that she lacked the appropriate credits. She had turned to the teaching field hoping to obtain a job in outdoor education. She felt committed to her present career and felt it was unlikely that she would leave the field. She felt that she would be a good teacher because she had an outgoing personality. In addition, she was attracted to teaching because she enjoyed children and liked the idea of influencing the future generation.

This subject had enjoyed many interests during adolescence. She had participated in sports as a team member and also as a coach of younger children. She felt that her coaching experience had made her aware that she liked teaching younger people. Social interest groups such as Guides and the 4-H Club had also been important to her during her high school years. Her father was also interested in sports and had encouraged her to participate. During the summers she had worked in a nearby provincial park. She felt that this experience had influenced her to become interested in outdoor education.

This subject's mother had never worked, but the subject felt that she would have preferred to have a career. Evidently she had been a professional but felt that work and family life would be impossible to manage because her husband was a miner who worked shifts. She felt that if her mother had wanted to try working, her father would not have objected.

As her mother had not been entirely satisfied with her own life, she had encouraged her daughter to get a good education so that she could live in a more prosperous area and have a better life. Evidently her mother had experienced life as a miner's wife as restrictive. Her mother's unhappiness with her life seemed to have influenced the subject to develop liberal sex-role attitudes. She intended to stop teaching when her children were young, but planned to return to work when they entered school. She was already married and had discussed her career plans with her husband who had agreed with her projected life plan.

Case Study No. 18

This subject is a female, aged 21, who was completing a degree in elementary education. She had considered graduate work in both psychology and law. While she was committed to teaching at the present time, she saw a career change as possible in the future. She was of the opinion that teaching was a career which could be stagnating unless the individual were excellent in his job. She was attracted to the psychological aspects of teaching although she enjoyed being in the classroom. She felt that she might like to get into a special education consultant job in the future as it would allow her to be more involved in the psychological development of her pupils.

During her adolescent years this subject had been active in sports and volunteer work. She had been a junior camp counselor and had been involved with the Red Cross group at her church. It appeared that her mother had shared these interests. Possibly these experiences were related to her choice of a profession which involved working with people. She had had varied work experiences. She had worked as assistant to a veterinarian, as an assistant to a photographer, and as a secretary. She did not feel that any of these experiences had exerted any influence over her job choice.

This subject's mother had returned to work as a teacher when the subject was in elementary school. She felt that her mother had definitely chosen to work. She did not perceive her

mother as having experienced conflict between her home and professional roles. In her opinion, her father had been happy when her mother worked because she had been happier.

The subject felt that her mother was satisfied with her own life and would be tolerant if she chose a different lifestyle. If she chose to work when the children were small, she felt that her mother "wouldn't bat an eyelash over it." Possibly as a result of her mother's example of flexibility and happiness, she hoped to have a career in the future. She expected that her husband would consider her happiness as important as it would contribute to the general happiness of the family. If she continued her work after having a family, she expected that she would receive help from her husband with traditionally feminine activities such as meal preparation and housework. She would consider it unsatisfactory if her husband expected her to work and run the household unassisted. In general, it appeared that this subject was following the liberal sex-role attitudes her mother had shown in the past.

Case Study No. 19

This subject is a male, aged 30, who was completing his training in elementary education in the Faculty of Education. He had worked for several years in personnel after leaving university. He had been hired as a French Immersion teacher which had been his goal when he had entered teacher's college. He had considered other alternatives involving languages such as translation or interpretation but felt that he did not have the temperament for this type of work. He was interested in becoming an Immersion teacher because he liked teaching languages in a socio-cultural context where he felt that he might serve as an instrument of social change. Although he was aware that secondary school teaching is often regarded as having more social status, especially for men, he felt that the language programs at this level were inferior to the Immersion programs found in the elementary school system. He had aimed for this type of job in 1972 and had worked to become bilingual since that time. Consequently, he doubted that he would change his career after investing so much time in developing the skills his job required.

He described himself as being a loner during adolescence. Nevertheless, he had many interests. He enjoyed several sports (football, wrestling, track) and participated in dramatics. He also devoted time to reading in many areas. He felt that his mother had encouraged him in this latter interest. As he was somewhat older than most subjects, he had worked at many jobs. He named the armed reserve, construction, racetracks,

and factory work as areas in which he had worked over the years. He felt that these jobs had influenced him in that he had developed empathy for people with varying life experiences. Prior to returning to school he had worked in personnel, which he had enjoyed as it involved people.

This subject's mother had never worked. He perceived her as preferring to be at home when her children were young. He commented that he had found her to be very supportive during his rather lonely adolescence. It appeared that he was closer to his mother than to his father. He felt that his mother would have preferred to return to work when her children were in high school. He felt that his mother would have encountered marital problems had she returned to work. She had taken odd jobs at times but had experienced conflicts as her husband seemed to be disturbed by her employment. The subject felt that his father experienced his wife's employment as a threat to his role as a breadwinner.

Although his parents had modeled traditional sex roles, he seemed to have been influenced towards more liberal attitudes by his awareness of his mother's dissatisfaction in later years. He felt that his wife's employment status was not entirely his decision and might vary according to the situation. He was already married and his wife had been working while he was in school. He realized that she might choose to do otherwise in the future when he was employed. In general, he felt that he would be happy if his wife were content with her lifestyle.

Case Study No. 20

This subject is a male, aged 25, who was completing elementary school training in the Faculty of Education. He had also considered taking a Master's in Business Management in order to enter the civil service. He felt committed to teaching but also indicated that he would probably go into another field if he were not able to acquire a permanent teaching position. He was attracted to the teaching profession because he enjoyed both children and the instructor role. He felt that his enjoyment of this type of work was important to his career choice. Since a career may last a lifetime, he felt that enjoyment of the task itself was extremely important. He mentioned that his father had been a laborer who had not been particularly satisfied with his work. Possibly his father's dissatisfaction influenced him to be concerned with the enjoyment found in a career.

This subject described himself as being very sports oriented during his adolescent years, participating in football and hockey in his spare time. His family were not particularly sports oriented but did enjoy camping together. Although he worked in a gas station and at laboring jobs during high school and college, he did not feel that these experiences had influenced his job choice.

Both his parents had been employed most of the time during his childhood. His mother was presently employed as an assistant bank manager. He felt that his mother had initially chosen to work although financial pressures had later made her job a necessity. In spite of the necessity of working, he felt that his mother was basically satisfied with her job and would still choose to work. He felt that she had worked hard to achieve her present position and so derived considerable satisfaction from her work. He did not feel that his mother had experienced problems in meeting her family and work obligations. He felt that his father regretted the necessity of his wife working since he felt that it reflected on him as a breadwinner. Nevertheless, he felt that the benefits of an extra income outweighed these considerations for his father.

The subject himself seemed to have developed liberal sex-role attitudes. He stated that he would not object to his wife working as he did not view this issue as his choice. He hoped that his wife would be dedicated to her career. He felt that modern men had to accept the fact that career oriented women would not be inclined to give up their ambitions. He felt that this would lead to adjustments on his part so that his wife's career could be accommodated. However, he felt that he was a flexible individual who would be able to adjust to his wife's career.